MEETING ABSTRACTS

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Keynote lectures

S1
The role of practice-based research in stimulating educational innovation in healthcare
Sandra Hasanefendic (s.hasanefendic@vu.nl)
Vrije Universiteit Amsterdam, De Boelelaan 1105, 1081 HV Amsterdam, the Netherlands
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Background
Practice-based research is not uncommon in healthcare. In fact, the way nurses and doctors train is through extensive and intensive practice [1]. In other words, practice-based research has been used to gain new knowledge partly by means of practice and the outcomes of that practice [2]. Practice-based research networks have also been gaining on importance in healthcare as ways of addressing research questions informed by practicing clinicians. They aim to gather data and improve existing practices of primary care [3], practice-based research is not only about gaining new knowledge via practice and improving existing practices.

Objective
In this presentation/paper I explain and highlight the role of practice-based research as an instrument for educational innovation in healthcare sciences.

Methods
I used interview excerpts and examples of projects related to healthcare at different universities of applied sciences in the Netherlands and Germany (also known as polytechnics in Portugal) to advance the role of practice-based research in educational innovation. This type of research is an integral part of teaching and curricular assignments in the healthcare settings in the Netherlands and Germany, and particularly at universities of applied sciences. I emphasized how practice-based research can improve and enrich the curricula, while at the same time, building necessary skills of future healthcare professionals and improving practices in already existing healthcare institutions.

Results
I show that practice-based research is in fact short term problem-oriented research which serves educational purposes by upgrading students’ and teachers’ skills and knowledge of the profession and dynamics in the work environment; which also has the potential to improve company products or design solutions and at the same time contribute to local and regional innovation in professions and profession related institutions [4-5]. Its role is multidimensional and dialectic insofar it serves multitude goals and is accomplished in dialogue among relevant stakeholders [6]. Practical suggestions for healthcare educators and practitioners in designing their curricula to incorporate the basic elements of this practice-based research are also offered in this presentation/paper.

Conclusions
Practice-based research is more than knowledge acquisition via practice. Its role and goals expand to enriching educational curricula with a more comprehensive engagement of external and professional stakeholders, at the same time contributing to student soft and professional skill development and solving stakeholder problems or optimizing services and products at local or regional levels.

References

Keywords
Practice-based research, Short term, Problem oriented, Healthcare, Universities of applied sciences.

S2
Is sexuality a right for all? Sexual revolution in the old age
Francisco J Hernández-Martínez (francisco.hernandezmartinez@ulpgc.es)
Universidad de Las Palmas de Gran Canaria, 35001 Las Palmas de Gran Canaria, España
BMC Health Services Research 2018, 18(Suppl 2):685

Background
“We do not think it is erotic” (interview, Ricardo Iacub, 2018). It still impacts us, and what do we do with it? Do we let it pass? Do we encourage them? Throughout the centuries, sex has been postulated as the impulse that gives life to people. This word, of Latin origin, has always aroused much interest in society and in all stages of life; but it must be differentiated from “sexuality”, because it contemplates various aspects among which it is found; sex, identities and gender roles, eroticism, pleasure, intimacy, reproduction and sexual orientation [1-6]. Sexuality is a vital dimension that is present in all stages of life, at least since adolescence. It contributes significantly to health and quality of life and is, moreover, a right recognized by international organizations such as the World Health Organization (WHO) [4, 7-9].
Despite this, old age has traditionally been considered as a stage in which sexual needs would be absent, in which people are no longer interested or have the capacity to lead an active sexual life [3-8, 11]. Master and Johnson, two famous American sexologists, argued that older people should fight against a false belief, which considers that “sexual incompetence is a natural component of the aging process”. This belief limits access to sexuality due to fear of failure, to consider that it is no longer correct, that it can be sick or perverse. The same authors pointed out that many of their patients had gone to priests, rabbis, doctors or psychologists and that they had received the answer “it is logical at their age” [3, 7, 10].

The studies carried out, in our country and internationally, show that the majority of the elderly, and especially those who have a partner, are still sexually active until very old ages [6-9]. The keys to continue carrying and enjoying a quality sexual life in old age should be recognized and admitted at a social level, and among others, we should start; to be free of prejudices and stereotypes that condemn the elderly to lack of desire, or that associate sexuality in old age to something dirty or morally condemnable. Stop associating youth and sexuality. Do not assume the possible problems or difficulties that may appear as irreversible barriers. Age influences the decrease in sexual activity and interest, but not in satisfaction. It is demonstrated that sex and sexuality play an important role in healthy and full aging [1-3, 6-9, 11]. Taking into account these premises, throughout the presentation will present the results of a study conducted in the Canary Islands among people over 65 years, users of senior centers whose main objective was; obtain data on sexual activity, sexuality and whether age-related pathologies have affected their sexual relations. Against these prejudices, older adults need, want and seek some kind of loving exchange; “Old people want and need to talk about sex”, and also young people need to think that we have a lifetime to continue enjoying and experimenting with our sexuality.

References

Keywords
Active Aging, Sexuality, Elderly, Sexual activity and benefits.

S3

Promoting independent living in frail older adults by improving cognition and gait ability and using assistive products – MIND&GAIT Project
João Apóstolo (apostolo@esenf.pt)
The Health Sciences Research Unit: Nursing, Portugal Centre for Evidence Based Practice: A Joanna Briggs Institute Centre of Excellence, Nursing School of Coimbra, 3000-232 Coimbra, Portugal
BMC Health Services Research 2018, 18(Suppl 2):S3

Background
Frail older adults are more susceptible to falls, fractures, disability, dependency, hospitalization and institutionalization [1]. Physical and cognitive decline, associated with frailty, potentiate the development of geriatric syndromes and lead to a decrease in self-care, depressive vulnerability and a decrease in quality of life [2]. Adapted physical exercise and cognitive stimulation allow the maintenance of physical and cognitive capacities, which is reflected in an improvement on the functional status of the elderly and in a reduction of associated comorbidities [3].

Objective
To promote independent living in frail older adults by improving cognition and gait ability and using assistive products.

Methods
It is planned to develop a combined intervention that will be composed by a digital cognitive stimulation program and an adapted physical exercise program. It is also being developed an auto-blocking kit mechanism for rolling walkers as an assistive product that could be used during the physical exercise program. A randomized-controlled trial will be developed to test the efficacy of the combined intervention in frail older adults. At the same time, a web platform will be developed and it will be used as a repository, providing digital intervention’ materials and results.

Results
Through the implementation of a multidisciplinary strategy, significant benefits are expected in the prevention and maintenance of physical and cognitive decline of the frail older adults. It is hoped that for frail older adults the combined intervention and its digital components would be synonymous of autonomy and improvement of their quality of life, contributing to active aging. The project, being based and tested in clinical practice, will guide health professionals, caregivers and general public to promote the independence of this population.

Conclusions
Cognitive interventions and physical exercise have impact on cognitive decline, a condition that assumes more importance once it is related with frailty in older adults. This multidisciplinary strategy gives the opportunity to older adults to act actively in their health through the spontaneous performance of cognitive and physical exercises available on the web platform. The components of the combined intervention will allow better reintegration of this population into society of today’s world. By promoting research policies among educational institutions and health service delivery institutions, the MIND & GAIT project will make health care available to the frail elderly population more accessible to professionals, caregivers and general public.

Trial Registration
NCT03390478

Acknowledgements
The current abstract is being presented on behalf of a research group. It is also part of the MIND&GAIT project Promoting independent living in frail older adults by improving cognition and gait ability and using assistive products, which is a Portuguese project with the support of COMPETE 2020 under the Scientific and Technological Research Support System, in the co-promotion phase. We acknowledge The Health Sciences Research Unit: Nursing (UICISA. E) of the Nursing School of Coimbra, the Polytechnic Institute of Leiria, the Polytechnic of Santarém, Polytechnic of Coimbra and also to other members, institutions and students involved in the project.
In the digital transformation Era, there is an increasing need to provide services capable of offering functionalities that allow the user a quicker and easier access to healthcare related information. These digital services aim to provide access to more information, allowing the users to make better informed decisions.

In Portugal’s National Health Service Portal (SNS Portal www.sns.gov.pt), there are already several digital services available, the Citizen’s Area aggregates these services for the user.

Citizen’s Area main objectives is to facilitate communication and interaction between Citizens, Professionals and Health Institutions, allowing access to information in an integrated way, providing a better healthcare. Simple and accessible to all users, this area allows personal health information access in one place at any time, thus avoiding unnecessary commuting. This area has access monitoring and permission policy configurations, allowing the Citizen to view access history and configure access permissions to their health information, thus increasing control and management of their own personal health information.

Health Literacy is actively promoted though multiple initiatives, in dedicated areas accessible in SNS Portal and Citizen’s Area.

Keywords
Citizen’s Area, SNS Portal, Healthcare, Digital Services, Literacy.

S6
CBmeter- a new medical device for early screening of metabolic diseases
Maria P Guarino1,2,3, Gabriel Brito1,4, Marlene Lages1, Rui Fonseca-Pinto1,4, Nuno Lopes1,4
1Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3Chronic Diseases Research Center, NOVA Medical School, 1150-082 Lisbon, Portugal; 4School of Technology and Management, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal

Correspondence: Maria P Guarino (maria.guarino@ipleiria.pt)

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Background
Type 2 diabetes mellitus (T2DM) is a highly prevalent disease worldwide which is asymptomatic in about 44% of patients being critical to search for new ways of early diagnosis. Recent studies have demonstrated that the etiology of this disease may be associated with alterations in the function of the carotid body (CB), a chemosensor organ located within the bifurcation of the carotid artery. In animal models of metabolic syndrome, it was observed that the CBs are overactivated, underlying diseases such as obesity, hypertension and T2DM. This discovery provided a new paradigm in the neuroendocrinology field, suggesting that diagnostic function of the CBs has predictive value for the development of metabolic diseases. Despite this fact, it is not common in clinical practice to look at the CBs as organs associated with endocrine dysfunction and we believe this is probably due to the nonexistence of a user-friendly, portable medical device that diagnosis the function of the CBs.

Objective
The general aim of this work is to develop a novel device that evaluates the function of the carotid bodies - a CBmeter. We are also developing a standard test meal to be used as a physiological dynamic test during CBmeter utilization.

S4
Electronic health records in Portugal
Cristiana Maia (academia@spms.min-saude.pt)
Serviços Partilhados do Ministério da Saúde, 1050-189 Lisboa, Portugal

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Health Literacy is actively promoted though multiple initiatives, in dedicated areas accessible in SNS Portal and Citizen’s Area.

Keywords
Aged, Cognitive decline, Cognitive stimulation, Frailty, Physical exercise.

S5
Economic crisis and inequalities in the Southern European health systems
Mauro Serapioni (mauroserapioni@ces.uc.pt)
Centro de Estudos Sociais, Universidade de Coimbra, 3000-104 Coimbra, Portugal

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Background
Despite the overall increase in living standards and the introduction of universal health systems, many studies have identified persistent inequalities in all industrialized countries. The Southern European countries, namely Greece, Italy, Portugal and Spain, although the reforms of the 1970s and 1980s introduced universal national health services, social inequalities in health only became a critical issue in the late 1990s. However, the issue of health inequalities became a priority from 2010-2011, when (although with different degrees of severity) the four countries began to feel the first effects of the financial crisis. Various studies have identified the impact of the economic crisis on the most vulnerable population groups, with increasing rates of mental health disorders and a rise in suicides.

References

Objective
After a brief contextualization of the welfare state in southern European countries and a characterization of health systems in Greece, Spain, Italy and Portugal, the main health inequalities are described, identifying the potential inequity induced by the reform processes undertaken and the current austerity policies implemented.

Methods
The study resulted from a non-systematic literature review, based on the Scoping review proposal. A total of 74 publications were analysed.

Results and Discussion
The analysis has highlighted common characteristics and trends in the Southern European health systems, as well as some significant differences between them. In the four countries, the social gradient (particularly in education, income, and work status) is the principal determinant factor in health inequalities. Another key aspect is the steady increase in out-of-pocket spending in health as a percentage of total health spending in all four countries, markedly in Greece and Portugal. The analysis has identified potential inequities induced by the reform processes, as result of new relations between the public and private sectors in services provision. Another example of how health systems produce inequalities is the rising proportion of users’ health expenses covered by co-payments and user fees. Geographic inequality in health is another critical issue, observed in all four Southern European countries. Finally, the recent debate in the international literature on the relationship between different welfare state regimes and health inequalities will be discussed.

Conclusions
The crisis and austerity policies have greatly increased the level of dissatisfaction with healthcare provision in these countries.

Keywords
Health Inequalities, Health Systems, Economic Recession, Southern European Countries.
Methods
This medical device will synchronously assess several physiological variables: heart rate, respiratory rate, blood pressure variation, arterial pulse oximetry and circulating glucose, as well as the physiological responses to hyperoxia and meal ingestion. The results obtained will be analyzed using Matlab, in order to develop an algorithm with predictive value for early diagnosis of metabolic diseases. We are also developing a standard test mixed-meal to assess post-prandial glucose excursions with the CBmeter. The work is currently in the prototype development phase.

Results
A preliminary pilot-test performed with the prototype revealed that all the proposed variables are assessable with the CBmeter. The standardized test meal used in the pilot-test caused a glucose excursion curve that stabilized 30 minutes after ingestion, being suitable for metabolic evaluation with the CBmeter. Interstitial glucose variation was 16.6mg/dl glucose with a latency time of 21 min. Heart rate did not vary significantly after the meal ingestion.

Conclusions
The CBmeter prototype is currently optimized to be used in a medical device clinical-trial with healthy volunteers. The mixed meal developed has proven to be suited in healthy volunteers to determine variations in CB-related cardiorespiratory parameters.

Acknowledgements
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Keywords
Carotid body, Diabetes, Early diagnosis, Medical device.

S7 Help to care for users and caregivers: Help2care
Maria dos Anjos Coelho Rodrigues Dixe1,2 (maria.dixe@ipleiria.pt) 1Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
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There are several studies showing that the family members providing care to their relatives need to acquire abilities that enable them to be competent in their performance, having the health care professionals an indispensable role in their training [1]. Empowering caregivers can help in reducing health care costs, improve the quality of life of both user and caregiver [2], their mental health [3] and greater satisfaction with their care [4]. The continued support to caregivers can help them in decision making in less serious health situations and to use fewer health services [5].

The main aims are: to construct assessment instruments to evaluate the patient and caregivers needs and abilities concerning self-care; to develop a support manual accessible to all caregivers; to make videos that demonstrate technics and tasks procedures to support the caregiver in the caring process; to develop a digital platform where all the developed resources will be available (website and app) to support the care transition from the hospital to the residence integrating professionals from the hospital and from the primary healthcare services; to empower health professionals to use the caregivers’ and users’ self-care empowerment model.

This project will include participation of students, teachers, researchers and stakeholders throughout the project using an action research, where, as the materials are developed, the population target acceptance will be tested, justifying the corrections needed before moving to the next step, using a consistent methodology with an action and learning research process. Population: The population will be: dependent members of the family present the criteria laid up and Health professional. To evaluate the patient and caregivers’ needs and capacity concerning self-care we will construct them (activity 1). During the pilot test period we will have, two kinds of metrics: Qualitative metrics available on (http://garyperlman.com/quest/). And quantitative monitoring metrics for the use of the mobile app, including retention rate, churn rate, daily active users (DAU), daily sessions per DAU and stickiness, and also access statistics per module/feature on the app.

The mains output will be: A training model of caregivers and users for self-care composed with: a caregiver’s support manual; a digital platform and a manual with the empowerment model to be used by health professionals.

Acknowledgements
The current abstract is being presented on behalf of a research group. It is also part of the Help2care - project: Help to care for users and caregivers, which is a Portuguese project with the support of COMPETE 2020 under the Scientific and Technological Research Support System, in the co-promotion phase. We acknowledge the Polytechnic of Leiria, the Polytechnic of Santarém, Polytechnic of Castelo Branco, Centro Hospitalar de Leiria and also to other members, institutions and students involved in the project.

References

Keywords
Transitions of care, Caregivers, Self-care, Users.

S8 TeenPower: e-Empowering teenagers to prevent obesity
Pedro Sousa1,2 (pedro.sousa@ipleiria.pt) 1Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
BMC Health Services Research 2018, 18(Suppl 2):58

Background
Adolescent obesity has reached epidemic proportions, being urgent to find effective prevention strategies. The core components of classic prevention programs have been unable to obtain the desired adherence. The solution may involve a more extensive and frequent contact with the healthcare team and the use of alternative communication channels and interacting/dynamic technologies with adolescents. TeenPower is a transdisciplinary practice-based action research project that aims to develop innovative interventions to promote healthy behaviors. This project is promoted by the polytechnics of Leiria, Santarém and Castelo Branco, Municipio de Leiria (City Council), as well as local schools and primary healthcare stakeholders, key partners in the development phase and in the implementation of the intervention program.

Objective
The main goal is the development, implementation and evaluation of a program for the promotion of healthy behaviors and prevention of obesity in adolescence, based on e-therapy and sustained by the case management methodology. The project is directed to the cognitive-behavioral empowerment of adolescents, through increased and interactive contact between adolescents and a multidisciplinary healthcare team. The use of Information and Communication Technologies (ICT) in
the intervention can optimize resources and maximize impact, as a complement to conventional approaches.

Methods
The project includes the development of three complementary studies: (S1) evaluation of adolescents’ health status and cognitive-behavioral indicators, (S2) usability evaluation of the TeenPower platform and mobile app (S3) implementation and adherence evaluation to the TeenPower intervention program. Participants will be recruited from the school groups of Leiria, Santarém and Castelo Branco, aged between 12 and 16, with easy access to internet and smartphone/tablet (inclusion criteria). Intervention include behavioral, nutritional and physical activity counselling (online and face-to-face psycho-educative sessions). The e-therapeutic platform and mobile app (TeenPower) includes educational resources, self-monitoring, social support, interactive training modules and motivational tools. In addition to the case manager, the program will also have the direct support of an interdisciplinary team (nurse, nutritionist, exercise physiologist, among others).

Results
Expected results includes the delivery of the TeenPower intervention program, including an interactive application (web and mobile); scientific papers, communications and reports; workshops and conferences. We will evaluate adolescents’ health status and cognitive-behavioral indicators, evaluate Teenpower usability and program adherence.

Conclusions
The positive evaluation of the intervention program will stimulate the inclusion of ICT in the promotion of salutogenic behaviors and overweight prevention, creating technological interfaces that will allow customizing the intervention parameters and facilitating the monitoring and tracking.

Acknowledgements
The current abstract is presented on the behalf of a research group, the TeenPower research team. It is also part of the project TeenPower: e-Empowering teenagers to prevent obesity, co-funded by FEDER (European Regional Development Fund), under the Portugal 2020 Program, through COMPETE 2020 (Competitiveness and Internationalization Operational Program). We acknowledge the Polytechnic Institutes of Leiria, Santarém and Castelo Branco, the Municipality of Leiria (city council), and also other members, institutions and students involved in the project.

Keywords
Adolescents, Obesity, Health promotion, e-health, Mobile.

The Early Warning System for Basic School - SAPIE-EB in the promotion of school success, psychological health and career development
Pedro Cordeiro, Paula Paixão
Faculdade de Psicologia e de Ciências da Educação, Universidade de Coimbra, 3000-115 Coimbra, Portugal
Correspondence: Pedro Cordeiro (pedcordeiro@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):S9

We present the “Sistema de Alerta Precoce do Insucesso Escolar no Ensino Básico (SAPIE-EB)”, a sophisticated early warning system that ealy flag the students’ risk for school failure and ill-being, systematically monitor the students’ progress in the dimensions of and empirically assess the educational impact of the interventions in the dimensions of academic success, psychological health and career development. The SAPIE-EB is a user-friendly system that converts students’ raw data available at schools in knowledge, providing easy-delivered and intuitive reports on students’school failure, dropout and interventions, hereby allowing to deepen the knowledge about their causes and explanatory processes. The SAPIE-EB will be tested in 75 Portuguese basic schools. It is expected, with the implementation of the SAPIE-EB to reduce school retention in about 3% in a two-year interval period. Longitudinal research will attest the efficacy of the SAPIE-EB, from longitudinal quasi-experimental research designs.

Keywords
Early Warning Systems, SAPIE-EB, School Success, Psychological Health, Career development.

Oral Communications

01
Nursing professionals victims of verbal abuse by their coworkers from the same work unit
Maiara Bordignon, Inês Monteiro
School of Nursing, University of Campinas Campinas, 13083-887 Campinas, São Paulo, Brazil
Correspondence: Maiara Bordignon (bordignonmaira@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O1

Background
Violence among professionals of health teams has been exploited over the years with considerable attention to nursing [1-5]. The literature has also highlighted the impact of horizontal violence on the individual, unit and institution, such as, its negative influence on job satisfaction and possible harms to the safety culture, as well as to the wellbeing of professionals [3-5].

Objective
To present the frequency with which nursing professionals have suffered verbal abuse perpetrated by their coworkers, from the same work unit, during the last year and the professional categories involved in the abuse.

Methods
A cross-sectional study performed with a sample of 267 nursing professionals – registered nurse, nursing assistant/technician – working in Emergency units in Brazil. The experience of verbal abuse at work suffered by nursing professionals in the last 12 months was accessed using questions of a questionnaire about verbal abuse [6]. Data were described allowing to identify frequencies and professionals involved in the abuse. This study was authorized by institutions and approved by the Ethical Research Board of the university.

Results
Among the victims of verbal abuse, 23 (15%) nursing professionals reported that the last verbal abuse suffered was from coworkers of the same work unit, excluding abuses perpetrated by a boss or supervisor. At least twenty-one (91%) cases occurred in the emergency units that were part of the study and of these eighteen professionals indicated the perpetrator’s profession, revealing that in nine (50%) cases the abuse was perpetrated by a coworker with the same profession, mostly registered nurse-to-registered nurse (5–56%). When the perpetrator’s and the victim’s profession were different (9–50%), the abuse occurred more frequently from nursing technician-to-registered nurse (3–33%). The presence of the doctor was identified in at least one situation of abuse occurred in the emergency units studied and was directed to a nursing technician. There was no report of verbal abuse perpetrated by other professionals of the non-medical team and who did not participate in the nursing team.

Conclusions
Our study showed that in almost all instances verbal abuse occurred among the nursing staff professionals themselves. Organizational policies and strategies focusing on violence contributors factors in health care teams need to be structured to prevent violence among professionals, representing a challenge to health management.

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References

Keywords
Workplace violence, Nurses, Nursing, Emergency Nursing.

O2
Social representations of violence on the elderly: an injustice and a badness
Felisminha RP Mendes1,2, Otilia Zangão1, Tatiana Mestre1
1Escola Superior de Enfermagem S. João de Deus, Universidade de Évora, 7004-516 Évora, Portugal; 2Centro de Investigação em Desporto, Saúde e Desenvolvimento Humano, Universidade de Évora, 7004-516 Évora, Portugal.
Correspondence: Otilia Zangão (otiliaz@uevora.pt)
BMC Health Services Research 2018, 18(Suppl 2):O2

Background
In contemporary society, ageing is a phenomenon that marks all developed societies. Portugal is one of the most aged countries in Europe. Currently, Portugal shows a life expectancy at birth of 81.3 years, an average value in terms of EU [1]. Social representations allow access to lay forms of thought, fundamental for understanding social phenomena and their consequences, and for the construction of scientific knowledge itself [2]. The Social Representations conduct “the behaviors and the practices and, in this way, justify the positions taken and the behaviors” [3]. Analyzing the social representations of violence on the elderly, from the current and past conceptions and daily practices of the elderly, allows us to have access to the dominant constructions in society about the social phenomenon that is violence and the way it is socially and individually expressed by its main actors.

Objective
To analyze the social representations of a group of elderly people about violence on the elderly and the reasons why this violence occurs.

Methods
Exploratory and descriptive research with qualitative approach, supported by Theory of Social Representations. It was attended by 237 elderly people aged 65-96 years, from the project “Ageing Safely in Alentejo” from University of Évora. The Free Speech Association technique was used and data were processed through qualitative data analysis software. All ethical procedures of human research were followed. Thus, all necessary authorizations for the study were requested, such as informed consent to the elderly. All conditions of anonymity and confidentiality of the responses obtained were also guaranteed.

Results
In social representations of violence on the elderly, the words most evoked by the elderly were injustice, to which were added: mistreatment, badness, bad, lack of respect, sadness, horrible and abandonment. In social representations about the reasons that lead to violence on the elderly, the words such as: lack of respect, lack of education and badness were predominant. These terms refer to the social devaluation of the elderly and their role in today’s society, as in the representations about violence.

Conclusions
The social representations of these elderly people about violence and their reasons points to the stereotypes associated with the prevalent ageism in our society, where the social devaluation of the elderly dominates the daily life conceptions and practices.

Acknowledgements
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References

Keywords
Social representations, Violence, Elderly, Elderly health, Discrimination.

O3
Relationship between the use of new technologies and musculoskeletal symptoms in children and adolescents
Paula C Santos1,2, Sofia Lopes1,3,4, Rosa Oliveira1, Helena Santos, Jorge Mota1, Cristina Mesquita1
1Department of Physiotherapy, School of Allied Health Technologies, Polytechnic Institute of Porto, 4050-313 Porto, Portugal; 2Research Centre in Physical Activity, Health and Leisure, Faculty of Sport, University of Porto, 4050-313 Porto, Portugal; 3Escola Superior de Saúde de Vale de Sousa, 4585-116 Gandra, Portugal; 4Centro de Estudos do Movimento e Atividade Humana, Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal.
Correspondence: Paula C Santos (paulaclara@es.ipp.pt)
BMC Health Services Research 2018, 18(Suppl 2):O3

Background
Childhood and adolescence are determinants of musculoskeletal development, and the attitudes and habits adopted during these periods can have repercussions in adult life. The increasing use of technologies is becoming more worrying due to the sustained and prolonged postures due to the use of these devices and the consequent impact on musculoskeletal health.

Objective
This study analyzes the relationship between the use of new technologies with musculoskeletal symptoms (MSS) in children and adolescents.

Methods
Cross-sectional study with a sample of 460 students aged between 10 and 18 years. Data were collected through a questionnaire that included the Nordic Musculoskeletal Questionnaire.

Results
98.5% of students reported the used a mobile phone, 84.3% laptop and 52.4% tablet. Only 50.0% of the individuals who used mobile phones, 48.5% of the laptop and 31.1% of the tablet considered having a correct posture during the use of these technologies. We verified that the individuals with MSS showed more times of use of new technologies than individuals without MSS. There were differences in the time (min/day) of mobile phone and laptop use among children and adolescents, respectively 102.6 ± 121.47 vs 205.8 ± 175.89 (p < 0.001) and 74.0 ± 78.08 vs 117.9 ± 127.26 (p < 0.001).
Background
Recent literature reinforces that interventions for fall prevention should include multimodal training [1]. However, even multimodal training tends to focus on exercises separately in single physical, cognitive or environmental conditions. An ecological approach to explain phenomena’s such as fall occurrence, underlines not only the accumulative effect of isolated variables but also interactions between different variables.

Objective
To reduce a set of correlated variables to a smaller number that may explain fall occurrence.

Methods
187 older adults aged 65 to 96 years were assessed for falling risk factors. Principal component analysis (PCA) was performed including data from the 6-minute walk test (6MWT) [2], Gait Scale [3], Fullerton Advanced Balance Scale (FAB) [4], body composition - fat body mass percentage (FBM %), Mini-Mental State Examination (MMSE) [5], Environmental Hazards Scale (EH) [6], health conditions (HC), time up and go test (TUG) [2] and the Epworth Sleepiness Scale (ESS) [7]. Factors with eigenvalues of at least 1.0 were retained and a varimax rotation was used to produce interpretable factors. A binary regression analysis was performed using the forward stepwise (conditional) technique to identify the most significant components explaining fall occurrence. Receiver operating characteristics (ROC) curves were used to assess the discriminative ability of the logistic model.

Results
Three principal components were identified. In component 1, the dominant variables concerned physical and cognitive fit (6MWT, Gait Scale, FAB, MMSE, TUG), in component 2 dominant variables concerned health and environmental conditions (FBM %, EH, HC), whereas in component 3, the dominant variable concerned alertness (ESS). These components explained cumulatively 37%, 56% and 70% of the variance in fall occurrence. Logistic regression selected components 1 (OR: 0.527; 95% CI: 0.328–0.845) and 2 (OR: 1.614; 95% CI: 1.050–2.482) as predictive of falls. The cut-off level yielding the maximal sensitivity and specificity for predicting fall occurrence was set as 0.206 (specificity = 72.7%, sensitivity = 47.7%) and the area of the ROC curve was computed as 0.660 (95% CI: 0.564-0.756).

Conclusions
This pilot study showed that multiple correlated variables for fall risk assessment can be reduced to three uncorrelated components characterized by: physical and cognitive fit, health and environmental conditions; and alertness. The first two were the main determinants of falls. Recommendations: Interventions for fall prevention should privilege multimodal training including tasks that work simultaneously physical fitness, cognitive fitness and alertness, considering participant’s specific health and environmental conditions.

Keywords
New technologies, Musculoskeletal symptoms, Children and adolescents.

Conclusions
Most students use new technologies in their daily lives, with less than half of them considering using these technologies in the right posture. It was also verified that individuals with MSS used more times new technologies than individuals without MSS. The time of use of new technologies increases with the age.

Keywords
New technologies, Musculoskeletal symptoms, Children and adolescents.

O4
An ecological approach to fall risk factors for preventive interventions design: a pilot study
Jorge Bravo1, Hugo Rosado1, Felismina Mendes3, Catarina Pereira1
1Nursing Department, São João de Deus Superior Nursing School, University of Évora, 7000-811 Évora, Portugal; 2Health Sciences and Human Development Center, Health and Sports Department, Science and Technology School, University of Évora, 7000-671 Évora, Portugal; 3Health Sciences and Human Development Center, São João de Deus Superior Nursing School, University of Évora, 7000-811 Évora, Portugal
Correspondence: Jorge Bravo (jorgebravo@uevora.pt)

Trial Registration
NCT03446352

References

Keywords
Principal component analysis, Falling risk, Physical fitness, Cognitive fitness, Environmental hazards.

O5
Relationship between smartphone use and musculoskeletal symptoms in adolescents
Paula C Santos1,2, Cristina Mesquita1, Rosa Oliveira, Raquel Azevedo, Sofia Lopes1,2
1Department of Physiotherapy, School of Allied Health Technologies, Polytechnic Institute of Porto, 4050-313 Porto, Portugal; 2Research Centre in Physical Activity, Health and Leisure, Faculty of Sport, University of Porto, 4050-313 Porto, Portugal; 3North Polytechnic Institute of Health, 4585-116 Gandra, Portugal
Correspondence: Paula C Santos (paulaclara@ess.ipp.pt)

Trial Registration
NCT03446352

Background
We are currently facing a society of adolescents who are increasingly dependent on technology, in particular the smartphone, and this phenomenon can even lead to limiting situations in which the person’s physical well-being is called into question. Intensive use of the smartphone may contribute to a decrease in physical activity and generate musculoskeletal symptoms (MMS).

Objectives
To verify the existence of a relationship between the use of the smartphone and: 1) MMS; 2) vigorous, moderate and sedentary physical activity.

Methods
An observational, analytical, cross-sectional study was conducted on a sample of 834 adolescents from five schools in the regions of Viseu, Vila Real and Porto. Data collection was performed through online questionnaires through the Qualtrics program, in order to perform the sociodemographic characterization of the sample and to determine behavioral habits related to health, as well as to the use of new technologies. Musculoskeletal symptoms were evaluated through the Portuguese version of the Nordic musculoskeletal questionnaire (NMQ) and physical activity through the International Questionnaire of Physical Activity (IPAQ).

Results
The adolescents who used the smartphone for the most time referred MMS in the cervical (p < 0.001), thoracic (p = 0.017), lumbar (p < 0.001), shoulders (p < 0.001), wrists/hands (p = 0.003) and knees (p = 0.013).
Adolescents who practice more vigorous physical activity (p = 0.023) use less smartphone, and those who have more time in sedentary physical activity (p = 0.008) use it more.

Conclusions
Adolescents who spend more time on smartphones refer more MMS. The use of the smartphone is associated with a more sedentary lifestyle, unlike the adolescents who practice vigorous physical activity that give less use to it.

Keywords
Smartphone, Physical Activity, Musculoskeletal Symptoms.

O6
Functional fitness and cognitive performance in independent older adults – fallers and non-fallers: an exploratory study
Jorge Bravo, Hugo Rosado, Felismina Mendes, Catarina Pereira
São João de Deus Superior Nursing School, University of Évora, 7000-811 Évora, Portugal
Health Sciences and Human Development Center, São João de Deus Superior Nursing School, University of Évora, 7000-811 Évora, Portugal
Health Sciences and Human Development Center, Health and Sports Department, Science and Technology School, University of Évora, 7000-671 Évora, Portugal
Correspondence: Jorge Bravo (jorgebravo@uevora.pt)
BMC Health Services Research 2018, 18(Suppl 2):O6

Background
Actual research reinforces the importance of multimodal exercise programs for fall prevention; however remains unclear which components should be included in exercise programs, considering physical and cognitive components.

Objectives
This exploratory study aims to identify the associations between functional fitness (FF) and cognitive performance (CP) in independent older adults, regarding fallers and non-fallers.

Methods
63 males and 124 females (65-96 years) were selected based on the criteria of moderate or high functional independency (≥18 points) determined by responses to the 12-item of Composite Physical Functioning Scale [1]. FF was assessed by the Senior Fitness Test Battery [2]. A composite Z-score was created based on the individual scores for each fitness item. CP was assessed by the Mini-mental State Examination adapted for the Portuguese population [3]. Descriptive statistics were calculated for all outcome measurements and comparisons were performed using independent sample t-Tests. Multiple regression analyses were performed to test associations between FF and CP.

Results
T-test comparisons showed that females were more flexible than males (p < 0.05). Males were taller and heavier than females (p < 0.05). No differences were observed between these independent fallers and non-fallers sample. Multiple regression analyses were performed to understand the association of FF with CP in fallers and non-fallers. Agility was negatively associated with the MMSE score in fallers and non-fallers; however, after adjusting for gender, age and education, this association was not significant for non-fallers (p < 0.05). Lower body strength showed positive associations (p < 0.05) with the MMSE score exclusively in non-fallers, regardless the adjustments. Likewise, the upper body strength was positively associated with the MMSE score (p < 0.05) in non-fallers after adjusting for age, gender and education (p < 0.05). On the other hand, the upper body flexibility showed negative associations with the MMSE score (p < 0.05) however this association did not remain significant after adjusting for gender, age and education.

Conclusions
Independent older adults with higher agility scores were more likely to have an improved CP, whether they are fallers or non-fallers. Body strength, particularly improved lower body strength, is associated with higher CP in non-faller older adults, independently of age, gender and education. This exploratory study increases the spectrum of research in multimodal programs by suggesting that agility and strength training should be included in exercise prescription for fall prevention, in order to foment CP.

Acknowledgements
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References

Keywords
Aging, Physical fitness, Accidental falls, Cognitive aging.

O7
Association between endurance of the trunk extensor muscles and the risk of falling in community-dwelling older adults
Sofia Flora, Ana Tavares, Joana Ferreira, Nuno Morais
School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
Correspondence: Sofia Flora (sofiaflora@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O7

Background
Falls in the elderly are a serious health problem and the result of the complex interaction between individual and environmental risk factors. Balance is considered a key factor for higher falling risk in this population [1, 2]; thus, assessment and preventive/rehabilitation programs targeting the balance control system are currently a clinical guideline [1]. Programs commonly include strength/power training of the lower limbs and trunk muscles and postural control exercises [1, 3]. Recently it has been shown that the elderly reach premature muscle fatigue during upright stance tasks [2], and that fatigue leads to poor balance control [4]. Muscular endurance hence appears to play an important role in the efficiency of the balance control system, particularly during performance of long lasting functional tasks. However, the association between muscle endurance and balance control measures has been overlooked, especially in the trunk muscles, despite its potential to assist clinicians and researchers to comprehensively screen falling risk factors and tailoring interventions accordingly.

Objective
The main purpose of this cross-sectional study was to determine the association between endurance of the trunk extensor muscles and the risk of falls in the elderly, considering possible co-factors such as age and BMI.

Methods
Community-dwelling adults ≥ 65 years were recruited from senior universities in the Centre region of Portugal. Exclusion criteria included severe physical/cognitive limitations that would prevent subjects from performing the testing protocol. Falling risk/balance was assessed using the Berg Balance Scale (BBS, score 0–56). Muscle performance was measured through the trunk extensor endurance test (in seconds). Simple and multiple linear regression analyses, using SPSS (v20), were conducted to predict the effects of muscle endurance, BMI and age on balance control. Statistical significance was set at 0.05.

Results
Fifty-nine volunteers (44 females, age = 71 ± 5 years, height = 1.60 ± 0.09 m, mass = 71.67 ± 14.35 kg, BMI = 28.02 ± 4.62 kg/m²) were included in the study. The largest correlation was found between the BBS score, and muscle endurance (p = 0.379), and BMI (p = -0.335). Muscle endurance predicted 7% of the BBS score (r² = 0.070, p = 0.024). When combined with BMI, muscle endurance accounted for ~16% (r² = 0.162, p = 0.003) of the total variance of the BBS score.
Unsurprisingly, when age was added to the previous model the predictive capacity increased, reaching ~21% ($r^2 = 0.214, p = 0.01$).

**Conclusions**

Endurance of the trunk extensor muscles and BMI predicted approximately 16% of the BBS score. Since these are modifiable factors, it is recommended that they should be routinely included in the screening of falling risk factors in the elderly and addressed accordingly in preventive programs.

**References**


**Keywords**

Muscle Endurance, Balance, Elderly, Risk of falls, Trunk Extensor Muscles.

**O8**

ICF Core Set for Obstructive Pulmonary Diseases: validation of the environmental factors component through the perspective of patients with asthma

Cristina Jácome1,2, Susan M Lage3, Ana Oliveira2, Augusto G Araújo4, Danielle AG Pereira1, Verônica F Parreira1

1Centro de Investigação em Tecnologias e Serviços de Saúde, Faculdade de Medicina, Universidade do Porto, 4200-319 Porto, Portugal; 2Centro de Estudos da População, Economia e Sociedade, 4150-171 Porto, Portugal; 3Universidade Tecnológica Federal de Minas Gerais, 31270-901 Belo Horizonte, Minas Gerais, Brasil; 4Hospital Carlos Chagas, 35900-595, Itabira, Minas Gerais, Brasil

**Correspondence:** Cristina Jácome (cristinajacome@ua.pt)

**BMC Health Services Research 2018, 18(Suppl 2):O8**

**Background**

To optimize a patient-oriented approach in asthma management, health professionals need to consider all aspects of the patient's actual context (physical, social and attitudinal). This context can be assessed using the Environmental Factors component of the International Classification of Functioning, Disability and Health (ICF) Core Set for Obstructive Pulmonary Diseases (OPD). The categories included in the Environmental factors component have been selected by respiratory experts, and have been validated from the perspective of physiotherapists and patients with chronic obstructive pulmonary disease. However, the validation of the perspective of patients with asthma will be essential to allow a more widespread application of the ICF in this population.

**Objective**

This study aimed to validate the Environmental factors component of the Comprehensive and Brief versions of ICF Core Set for OPD from the perspective of patients with asthma.

**Methods**

A cross-sectional qualitative study was conducted with outpatients with asthma using semi-structured individual interviews. Qualitative data were analysed through the meaning condensation procedure by two researchers with expertise in the ICF.

**Results**

Thirty-five participants (26 females; 41±13 years) were included. Eight (35%) categories contained in the Environmental factors component of the Comprehensive version of the ICF Core Set for OPD and 4 (100%) of those contained in the Brief version were confirmed by the participants. Additionally, 5 second level categories (Products and technology for employment; Flora and fauna; Natural environment and human-made changes to environment, unspecified; Domestic animals; Support and relationships, unspecified) and 13 third level categories (Food; Drugs; General products and technology for personal use in daily living; General products and technology for employment; Assistive products and technology for employment; Design, construction and building products and technology for gaining access to facilities in buildings for private use; Plants; Animals; Temperature; Humidity; Indoor air quality; Outdoor air quality; Health services) not included in the Core Set were identified.

**Conclusions**

The Environmental factors component of the Brief ICF Core Set for OPD was fully supported by the perspective of patients with asthma, contrasting with only one third of the categories of the Comprehensive version. The categories included in the ICF Core Set that were not confirmed by the participants and the additional categories that were raised need to be further investigated in order to develop an instrument tailored to patients’ needs. This will promote more patient-centred assessments and rehabilitation interventions.

**Keywords**

Asthma, International Classification of Functioning, Disability and Health, Environmental factors, Patient’s perspective.

**O9**

Attachment, self-compassion and mental health in the use of the internet to establish intimate relationships

Sónia C Simões1,2, Vanessa Vieira1, Mariana Marques1, Laura Lemos1

1Instituto Superior Miguel Torga, 3000-132 Coimbra, Portugal; 2Centro de Estudos da População, Economia e Sociedade, 4150-171 Porto, Portugal

**Correspondence:** Sónia C Simões (soniaismomes@ismt.pt)

**BMC Health Services Research 2018, 18(Suppl 2):O9**

**Background**

Currently, to our knowledge, there is no research with Portuguese samples comparing the levels of attachment, self-compassion and psychopathological symptoms in subjects who use and do not use the Internet to establish intimate relationships.

**Objective**

The present study aimed to investigate how individuals, who use the Internet to establish intimate relationships, differ psychologically from individuals who do not use the Internet for this purpose.

**Methods**

We used the following scales: Experiences in Close Relationships (ERI), Self-Compassion Scale (SELCFS), Brief Symptom Inventory (BSI) and a short sociodemographic questionnaire. The sample consisted of 350 individuals of whom 284 used social networks to establish intimate relationships (I) and 66 did not use the Internet for this purpose (NI), with a mean age of 29.90 (SD = 7.41) for the I group and 30.72 (SD = 8.26) for the NI group. The majority of the sample was single in both groups (I: 68.2%; NI: 62.8%), heterosexual (I: 79.6%; NI: 83.5%), working (I: 83.5% vs. NI: 82.7%), living alone (I: 40.3%; NI: 42.8%), not married or in a committed relationship (I: 79.6%; NI: 80.3%), and no children (I: 83.7%; NI: 78.1%).

**Results**

We found that man used more, compared to woman, the Internet to establish intimate relationships, and that the individuals that used most the Internet for this purpose had a higher number of short-term intimate relationships, compared to the group of subjects that did not use the Internet for this purpose. We also found that individuals without a romantic relationship (single, separated/divorced or widowed) were who resorted to this type of online service. Differences between groups regarding attachment, self-compassion and psychopathology were not found. However, it is important to highlight the stronger associations between psychopathological symptoms (global severity index and BSI dimensions) with attachment and self-compassion in the group that did not use the Internet to establish intimate relationships, compared to the group that reported using the Internet with this intention.
Conclusions
The results show the importance of deepening the research about the use of Internet to establish intimate relationships, since there are no studies concerning this area in Portugal.

Keywords
Self-compassion, Attachment, Psychopathology, Intimate relationships, Online dating.

O10
The obsessive-compulsive symptomatology: its relation with alexithymia, traumatic experiences and psychopathological symptoms
Sónia C Simões1,2, Timóteo Areosa1, Helena Espírito-Santo1, Laura Lemos1
1Instituto Superior Miguel Torga, 3000-132 Coimbra, Portugal; 2Centro de Estudos da População, Economia e Sociedade, 4150-171 Porto, Portugal

Correspondence: Sónia C Simões (sonia.simoes@ismt.pt)

BMC Health Services Research 2018, 18(Suppl 2):O10

Background
Alexithymia has been reported more significantly in subjects with obsessive-compulsive disorder (OCD), since they have a hard time recognizing and describing their own emotions. It should also be noted that many individuals with OCD often report experiencing traumatic situations. However, to our knowledge there are no Portuguese studies on the relationship between OCD (or obsessive-compulsive symptomatology), traumatic experiences, and alexithymia, justifying the relevance of this study.

Objective
The following goals were outlined: 1) To study the relationship between psychopathological symptoms, alexithymia and traumatic experiences in clinical and non-clinical samples; 2) To study and compare the traumatic experiences, the levels of alexithymia, and the psychopathological symptoms in clinical and non-clinical samples; 3) Check the relations of variables such as age, gender, marital status, and literacy with the presence or absence of obsessive-compulsive symptomatology in order to identify potential confounding factors.

Methods
The total sample comprised 115 individuals aged between 18 and 64 years (M = 31.50; SD = 10.61). For the creation of the 2 groups in comparison, the Maudsley Obsessive Compulsive Inventory (MOCl) cut-off point was used, in which results above 10 indicated the presence of obsessive-compulsive symptomatology. The clinical group had 40 subjects, aged between 18 and 49 years (M = 27.03; SD = 7.68) and the nonclinical group had 75 subjects, aged between 18 and 60 years (M = 33.89; SD = 11.21). The research protocol included: MOCl, Traumatic Experiences Checklist (TEC), Toronto Alexithymia Scale and the Brief Symptom Inventory.

Results
The clinical sample presented more psychopathological symptomatology and higher values of alexithymia compared to the nonclinical sample. No differences were found between groups in the presence of traumatic experiences, but the clinical sample presented higher scores of sexual abuse and trauma in the family of origin. Finally, there was a greater number of statistically significant associations and of a stronger magnitude in the non-clinical sample among the studied variables, compared to the clinical sample, especially according to the TEC.

Conclusions
It was verified that traumatic experiences and alexithymia, in particular, might be factors associated with the onset of obsessive-compulsive symptomatology, being a future study area to understand if they will also be risk factors for developing OCD.

Keywords
Obsessive-compulsive symptomatology, Traumatic experiences, Alexithymia.

O11
Loss of group immunity against measles
João MG Frade1,2, Carla Nunes3, João R Mesquita4, Maria SJ Nascimento5, Guilherme Gonçalves1
1Multidisciplinary Unit for Biomedical Research, Institute of Biomedical Sciences Abel Salazar, University of Porto, 4050-313 Porto, Portugal; 2Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3Public Health Research Centre, National School of Public Health, Nova University, 1600-560 Lisbon, Portugal; 4Agrarian Superior School, Polytechnic Institute of Viseu, 3500-606 Viseu, Portugal; 5Laboratory of Microbiology, Department of Biological Sciences, Faculty of Pharmacy, University of Porto, 4050-313 Porto, Portugal

Correspondence: João MG Frade (joao.frade@ipleiria.pt)

BMC Health Services Research 2018, 18(Suppl 2):O11

Background
Vaccination coverage rates higher than 95% contribute to the so-called group immunity effect with regard to measles vaccination [1]. However, to guarantee such immunity, it is important that those vaccine coverage rates also correspond to levels of seropositivity of measles antibodies (specific IgG antibodies levels > 150 mIU/ml) higher than 95% [2].

Objective
This study intends to evaluate from which moment, after having been vaccinated with MMR II (triple viral vaccine against mumps, measles and rubella), 95% of the individuals have specific IgG antibodies (Anti-Measles-IgG) <150 mIU/ml.

Methods
A cross-sectional study was conducted on 190 individuals, born in Portugal after 1990, with records of vaccine history documented in the Individual Record of Vaccination (IRV) and in the Individual Health Bulletin (IHB). Specific IgG antibodies to measles virus (Anti-Measles-IgG) were measured using the commercial immunoassay Siebens Enzygnost®Anti-Measles Virus/IgG.

Results
Data were grouped into three birth cohorts: born between 1990 and 1993, born between 1994 and 1995 and born between 2001 and 2004. It was found that those born between 2001 and 2004 were those that presented the highest levels of protection against measles, less than 2% of these individuals had levels of protection below the 150 mIU/ml. The cohort born between 1994 and 1995 was the one that presented the lowest protection against the disease, in which more than 50% of the individuals were below the protection threshold (150 mIU/ml). The cohort born between 1990 and 1993 is an intermediate cohort, where more than 50% of individuals are above protection threshold, but with a significant percentage of seronegative individuals. ANOVA analysis and Tukey’s multiple comparison analysis showed a statistically significant difference among the 3 birth cohorts (p < 0.001). The use of mathematical modelling showed that at the end of 9 years, after individuals have received MMR II, more than 95% individuals no longer presented specific IgG antibodies against measles virus (Anti-Measles-IgG) above 150 mIU/ml (p < 0.0001).

Conclusions
The time elapsed since the last MMR II vaccination seems to be associated with protection against measles. Nine years after MMR II, more than 95% of individuals are seronegative for the Specific IgG antibodies to measles virus.

References
Keywords
Immunity, Measles, Vaccination.

O12
Code Stroke in an emergency department - evaluation of results after 7 years of protocol implementation
Ilda Barreira1, Matilde Martins2, Leonel Preto3, Norberto Silva1, Pedro Preto3
1Serviço de Urgência, Unidade Local de Saúde do Nordeste, S301-852 Bragança, Portugal; 2Departamento de Enfermagem, Escola Superior de Saúde, Instituto Politécnico de Bragança, S300-146 Bragança, Portugal;
3Serviço de Ortopaedia e Traumatologia, Unidade Local de Saúde do Nordeste, S301-852 Bragança, Portugal
Correspondence: Leonel Preto (leonelpreto@ipb.pt)
BMC Health Services Research 2018, 18(Suppl 2):O12

Background
Fibrinolysis reduces mortality and disability after an ischemic stroke, and its benefits are documented with level of evidence I [1]. The major goal of the Code Stroke (CS) is to treat the eligible cases by fibrinolysis, within the therapeutic window of 4.5 hours after symptom onset [2]. Thus, an emergency department must operate efficient mechanisms to receive, diagnose, treat or transfer patients with stroke [3].

Objective
The main objective was to evaluate the results of the CS protocol implementation in an Emergency Department (ED) of a hospital in the North of Portugal. As secondary objectives we aimed to: (I) Characterize the patients in sociodemographic and clinical variables; (II) Calculate the activation rate of CS protocol and the rate of fibrinolysis.

Methods
Retrospective descriptive analysis, using data from the Manchester triage system and other secondary source of information, of all patients with ischemic stroke, haemorrhagic stroke, and transient ischemic attack (TIA) admitted to the Emergency Department between January 1, 2010 and December 31, 2016. Socio-demographic data, care times, cardiovascular risk factors and other clinical variables were collected. The statistical analysis was performed by ANOVA, at 0.05 significance level.

Results
In the 7 years analysed, 1200 patients with cerebrovascular disease were admitted in the ED. Among these patients, 63.0% presented ischemic stroke, 17.3% haemorrhagic stroke and 19.8% TIA. The population was predominantly male (54.8%) and had a mean age of 77.4 (± 11.2) years. Stroke code was activated 431 times, covering 37.2% (n = 282) of ischemic stroke, and have received thrombolytic therapy 18.4% (n = 52) of these patients. Door-to-needle time was, in average, 69.5 minutes. Mean (± SD) NIHSS (National Institutes of Health Stroke Scale) score was 14.8 (± 5.2) before treatment, decreasing to 11.8 (± 6.0) at two hours post- fibrinolysis (p < 0.05). For all patients (N = 1,200), we obtained the following prevalence of risk factors: Hypertension (64.7%), dyslipidaemia (30.3%), diabetes (26.5%), atrial fibrillation (23.3%), obesity (12.9%), smoking (6.3%) and ischemic heart disease (5.9%). The 24-hour mortality rate was 0.9% for ischemic stroke, 10.6% for haemorrhagic stroke, and 0% for TIA.

Conclusions
High rates of activation protocol were obtained for acute ischemic stroke, but only 52 patients met the criteria for fibrinolysis. The high age and comorbidity of patients with ischemic disease and its origin, predominantly rural, may have influenced the therapeutic window and the eligibility criteria for fibrinolysis.

References

Keywords
Stroke, Emergency Service Hospital, Fibrinolysis, Outcome and Process Assessment.

O13
SEMantic and PRAgmatic assessment platform for school-age children
Dulce Tavares, Eileen S Kay
Escola Superior de Saúde de Alcoitão, 2649-506 Alcabideche, Portugal
Correspondence: Dulce Tavares (dtavares@essa.pt)
BMC Health Services Research 2018, 18(Suppl 2):O13

Background
Semantic and pragmatic skills are developed throughout life and are essential in the development of school and social learning. Upon entering school, learning to read and write is developed in two large areas of knowledge. The first implies capacities of recognition and decoding of written symbols of the word and vocabulary development and the second allows the understanding of what is read through inferential capacities and non-literal interpretation. Often, students with reading comprehension difficulties go unnoticed. It is easier to detect a child who reads slowly, syllable by syllable, or with mistakes than those who read fluently but without understanding the content. These difficulties only become evident when questions are asked about the text and when it is necessary to understand the questions of subjects such as mathematics or science. Thus, success to reach the National Curricular Plan can be compromised.

Methods
Material was developed to evaluate semantic and pragmatic skills in school-aged children. In semantics, aspects of syntagmatic and paradigmatic relations (lexical field, synonymy and antonyms) and paronymy are evaluated. In pragmatics, competences are evaluated such as inferences, comprehension of idioms and proverbs. This material will be placed on a platform that can be consulted and used by different professionals working with children. The items that constitute this material took into account the stages of language development and school level. The lexicon used is in the domain of European Portuguese.

Results
The 756 children who were assessed attended public and private schools in Portugal. The results show an increasing evolution of the lexical competences of the children, with significant differences between the different age groups in all tests. There were no significant differences between female and male except in the paronym test. Regarding the socio-professional level of the child’s origin, it is verified that it is a differentiating factor of lexical competence because significant differences in all tests were observed regardless of the age of the child.

Conclusions
The authors concluded that it is of great importance to analyse lexical competence regarding the aspects of its organization, as it enables students to deal with academic tasks successfully, improving literacy as well as to be able to act in a systematic and productive way in the intervention with children with language disorders. The complexity and innovation of the pragmatic skills assessment (in European Portuguese) leads to this work to continue in development.

Keywords
Semantic, Pragmatics, Assessment, School age.
**O14**

**Quality of Life in Portugal – what factors can determine the QoL in people with Intellectual Disabilities and a great need of supports?**

António Rodrigo, Sofia Santos, Fernando Gomes
Faculty of Human Kinetics, University of Lisbon, 1495-687 Cruz Quebrada, Portugal

**Correspondence:** António Rodrigo (antoniorodrigo92@gmail.com)

**BMC Health Services Research 2018, 18(Suppl 2):O14**

**Background**

In Portugal, the Quality of Life (QoL) concept has become increasingly relevant, leaving aside a vision that only focus on the person’s limitations to one that emphasizes the quality of interactions between personal characteristics and environmental demands, within a socioecological model. This new paradigm changes the approach to evaluation and planning individualized supports, regarding adults with Intellectual and Developmental Disability (IDD). Research shows an emerging interest in analysing what personal and environmental factors have impact in QoL of persons with IDD. Therefore, our main goal is to analyse how individual characteristics influence QoL of people with intellectual disability with greater need of supports.

**Methods**

The Portuguese version of the Escala San Martín, that focus on 8 QoL domains: Self-determination, Emotional Well-Being, Physical Well-Being, Material Well-Being, Rights, Personal Development, Social Inclusion and Interpersonal Relations was applied to 293 individuals with intellectual disabilities, over 18 years-old (32.31 ± 8.29), 128 females and 165 males. All participants were institutionalized. The dependent variables were the domains/QoL total scores and the independent variables were gender, diagnosis, age, comorbidities and tackling medication. A comparative study was carried out using either independent samples t-tests or the one-way analyses of variance (ANOVA).

**Results**

When comparing gender, age and medication consumption, no significant differences were found, with all groups presenting similar mean QoL scores. Regarding comorbidities, significant differences were found when comparing physical well-being (p < 0.001), rights (p < 0.001) and social inclusion (p = 0.001) domains, with higher mean QoL scores to those without comorbidities. Significant differences were also found regarding diagnosis, in all domains except for the material well-being. Higher mean scores were found in individuals with a mild intellectual disability diagnosis, when compared to those with severe or profound ID diagnosis.

**Conclusions**

The information about personal factors with impact in QoL will help to meet challenges and will allow a more adjusted person-centred planning. Discussion and implications for practice will be presented.

**Keywords**

Individualized supports, Intellectual and Developmental Disability, Quality of Life, Escala San Martín.

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**O15**

**Relationship between the levels of functional capacity and family functionality and depression in the elderly**

Andréia WB Silva, Akemi Izumi, Giovanna G Vietta, Márcia R Kretzer
Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072, Porto, Portugal

**Correspondence:** Andréia WB Silva (andreiawb@hotmail.com)

**BMC Health Services Research 2018, 18(Suppl 2):O15**

**Background**

Depression is one of the most prevalent mental health problems among the elderly [1]. Functional limitations and changes in family dynamics characterize important risk factors for the onset of depression [1,2].

**Objective**

To analyse the relation between levels of functional capacity and family functionality and depression in the elderly.

**Methods**

A cross-sectional study was conducted including one hundred and thirty-eight (138) elderly individuals. The presence of depression, the levels of capacity to perform Basic Activities of Daily Living (BADL) and Instrumental Activities of Daily Living (IADL) and family functionality were assessed, respectively, by the Geriatric Depression Scale (GDS), Katz Index of Independence in Activities of Daily Living, Lawton Scale and family APGAR. The Statistical Package for Social Sciences (SPSS) version 18.0 was used to enter and analyse data (p < 0.05). The present study was approved by the Research Ethics Committee of UNISUL.

**Results**

The most prevalent characteristics were the age between 60 and 69 years (62.3%), the female gender (52.9%), the white ethnicity (87.0%), having accomplished up to 8 years of schooling (75.8%), and being retired (80.4%). 67.4% of the elderly did not have a spouse, and 14.5% lived alone. Depression presented a prevalence in 43.5% of the participants, of whom 88.3% were mildly depressive and 11.7% were severely depressive. There was a high frequency of hypertension (64.5%), Diabetes Mellitus (37.7%), osteoarthritis (39.1%), heart failure (28.3%), chronic obstructive pulmonary disease (15.9%) and asthma (9.4%). When evaluating functional capacity, 1.4% and 12.3% of the participants were classified as dependent to perform BADL and IADL, respectively. Family dysfunction was observed in 12.3% of the elderly (5.1% moderate dysfunction and 7.2% high dysfunction). When testing associations between depression and sociodemographic characteristics, the results showed statistical differences when comparing gender and marital status. Women were 1,538 times more likely to have depression than men (p = 0.031), and individuals who had a spouse were 1,580 times more likely to suffer from the disease (p = 0.018). When associating depression with other comorbidities, arterial hypertension was 1.652 times more prevalent (p = 0.024). Statistical differences were also identified with heart failure (PR = 1.941, p = 0.001) and asthma (PR = 1.923, p = 0.012). The functional capacity for BADL and IADL did not differ statistically. Family dysfunction was significantly associated with depression, which was 1,969 times more frequent in dysfunctional families (p = 0.003).

**Conclusions**

Depression in the elderly is associated with the female gender, having a spouse, cardiovascular and respiratory morbidities and family dysfunction.

**References**


**Keywords**

Depression in the elderly, Functional capacity, Family dysfunction.

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**O16**

**Microbiological evaluation of hotel units swimming pools**

Diana Assembleia, Teresa Moreira, António Araújo, Cecília Rodrigues, Marlene Mota, Manuela Arnorim
Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072, Porto, Portugal

**Correspondence:** Manuela Arnorim (mas@ess.ipip.pt)

**BMC Health Services Research 2018, 18(Suppl 2):O16**

**Background**

The information about personal factors with impact in QoL will help to meet challenges and will allow a more adjusted person-centred planning. Discussion and implications for practice will be presented.
Background

Swimming pools are currently operated by public and private entities for the development of sports, recreational and therapeutic activities [1]. For this reason, it is essential to guarantee the chemical and microbiological quality of the pool water, since they may be the origin of several pathologies [2].

Objective

The present research aimed to analyse data from the microbiological evaluation of indoor and outdoor swimming pool waters of Hotel Units of Mainland Portugal and Madeira in the year 2016, in order to verify the water quality.

Methods

A cross-sectional descriptive study was performed using database records from a northern laboratory. The microbiological parameters studied to characterize the indoor and outdoor swimming pool waters included CFU/mL of viable microorganisms at 37°C/24h, CFU/100mL of total coliforms, CFU/100mL of Escherichia coli, CFU/100mL of Enterococcus spp., CFU/100mL of Pseudomonas aeruginosa, CFU/100mL of total Staphylococcus and CFU/100mL of coagulase producers Staphylococcus. The samples were characterized as conforming and non-conforming according to the reference intervals indicated in Regulatory Circular n° 14/DA of 21/08/2009 of Direção Geral de Saúde [1].

Results

Of the total of indoor pools (n = 610) analysed, 25.09% (n = 153) were classified as non-conforming, being the microorganisms viable at 37 °C the most frequent cause of nonconformities (n = 105), followed by total coliforms and total Staphylococcus (n = 42 each). For the outdoor pools (n = 1982), 29.92% (n = 593) were also classified as non-conforming, once more being microorganisms viable at 37 °C the most frequent cause of nonconformities (n = 420), followed by total coliforms (n = 154).

Conclusions

Indoor swimming pools have a lower frequency of nonconformities compared to outdoor swimming pools. The ambient temperature and the presence of soils around the pool influence the microbiological quality of the water [3]. The determination of these parameters is useful when microbiological monitoring is carried out constantly.

References


Keywords

Microbiological evaluation, Microbiological quality, Swimming pool waters, Fecal contamination indicators.

O17

Normative values of functionality and quality of life of the portuguese healthy older people

Cátia Paixão1, Sara Almeida1,2, Alda Marques1,2

1Respiratory Research and Rehabilitation Laboratory, School of Health Sciences, University of Aveiro, 3810-193 Aveiro, Portugal. 2Institute for Research in Biomedicine, University of Aveiro, 3810-193 Aveiro, Portugal

Correspondence: Alda Marques (amarques@ua.pt)

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Background

The older population is increasing worldwide [1]. Since the average life expectancy is currently 71.4 years at birth and the healthy life expectancy is only 63.1 years, there is a need to enhance the focus on public health to promote health and healthy ageing [2, 3]. Measures of functionality and health-related quality of life (HRQoL) have been identified as predictors of healthy ageing [4-6]. However, to interpret results from those measures, and compare them within a population or across populations, normative data are necessary [7-9].

Objective

To establish age and gender-related normative values for the Five Times Sit to Stand Test (5 STS), 10 Meter Walk Test (10MWT), and World Health Organization Quality of Life-Brief (WHOQoL-Bref) for Portuguese healthy older people.

Methods

An exploratory cross-sectional study was conducted. Participants were recruited from the community. Functionality was assessed with the 5STS [4, 10], and 10MWT [5, 11] and Health-related Quality of Life (HRQoL) with the WHOQoL-Bref (scores: 0-20 and 0-100) [6]. Descriptive statistics was used to determine normative scores by age decades (60-69; 70-79; 80-89 years) and gender. Differences between age and gender were explored with multiple comparison tests using the Bonferroni correction.

Results

118 older people (76.2 ± 8.9yrs; n = 79, 66.9% female) participated in this study. Mean scores of 5STS (9.4 ± 3.5s; 13.0 ± 4.9s; 16.7 ± 6.7s), 10MWT (5.4 ± 2.1s; 6.5 ± 3.1s; 12.4 ± 5.9s) increased with age. Mean scores of the different domains of the WHOQoL-Brief 0-20 scale: physical health (15.9 ± 2.6; 15.1 ± 2.2; 13.6 ± 2.3), psychological (15.6 ± 2.6; 15.0 ± 2.3; 13.9 ± 1.9), social relationships (15.8 ± 2.8; 14.6 ± 2.4; 13.5 ± 2.4), environment (16.4 ± 2.3; 16.0 ± 2.3; 15.1 ± 1.6) decreased with age. Similar findings were observed in the WHOQoL-Bref 0-100 scale: physical health (74.6 ± 16.4; 69.3 ± 13.5; 60.4 ± 14.2), psychological (72.6 ± 16.4; 68.4 ± 14.5; 61.8 ± 12.1), social relationships (73.6 ± 17.6; 66.4 ± 15.2; 59.6 ± 15.2) and environment (77.6 ± 2.3; 74.9 ± 14.6; 69.4 ± 10.2). Females showed worst results in all measures. Mean scores of most measures were significantly different among age decades and gender (p < 0.05).

Conclusions

This study provided normative values of 5STS, 10MWT and WHOQoL-Bref for the Portuguese healthy older people. These data may improve the utility of these measures for health professionals to screen people and developed tailored interventions to improve functionality and HRQoL in this population. Normative values of WHOQoL-Bref will also allow identifying vulnerable groups and describing the profile of HRQoL in Portuguese healthy older people living in the community.

Acknowledgements

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O18

Relationship between balance and functionality, gait speed, physical activity and quality of life in community-dwelling older people
Sara Almeida1,2, Cátia Paixão1, Alda Marques1,2
1Respiratory Research and Rehabilitation Laboratory, School of Health Sciences, University of Aveiro, 3810-193 Aveiro, Portugal; 2Institute for Research in Biomedicine, University of Aveiro, 3810-193 Aveiro, Portugal
Correspondence: Alda Marques (amarques@ua.pt)
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Background
Balance is a modifiable risk factor for falls which represent a major public health problem for healthy ageing [1]. Predictors of healthy ageing in older people (i.e., functionality, gait speed, physical activity (PA) and health-related quality of life (HRQoL)) have been correlated with balance measures [2-5]. However, most balance measures do not assess the different components of balance hindering the design of interventions. To overcome this difficulty the Balance Evaluation System Test (BESTest) [6] and its short versions [7, 8] (new comprehensive measures of balance) were developed. Nevertheless, the relationship between the BESTest [6] and its short versions [7, 8] with functionality, gait speed, physical activity and health-related quality of life older people living in the community is still unknown.

Objective
To explore the relationship between the BESTest, Mini-BESTest and Brief-BESTest with functionality, gait speed, PA and HRQoL in community-dwelling older people.

Methods
An exploratory cross-sectional study was conducted. Community-dwelling older people (> 60 yrs) were recruited. Balance was assessed with the BESTest, Mini-BESTest and Brief-BESTest, functionality with the SSTS [9], gait speed with the 10MWT [10], PA with the Brief-PA questionnaire [11] and HRQoL with the WHOOQoL-Bref [12]. Descriptive statistics was used to characterize the sample. Correlations were explored with the Spearman correlation coefficient. By convention, the interpreting size of a correlation coefficient was negligible (0.00-0.30), low (0.30-0.50), moderate (0.50-0.70), high (0.70-0.90) and very high (0.90-1.00) correlation [13].

Results
One hundred and eighteen older people living in the community (76.2 ± 8.9 years; n = 79, 66.9% female) participated in this study. On average participants were overweight, with high body mass index (male: 26.9 ± 4.2 kg/m²; female: 26.8 ± 4.3 kg/m²) and fat-free mass (male: 29.5 ± 6.3 %; female: 37.6 ± 6.2%). BESTest, Brief-BESTest and Mini-BESTest were I) low and negatively correlated with intense (-0.34; -0.37; -0.32, respectively) and moderate (-0.37; -0.37; -0.35, respectively) PA; II) moderate and negatively correlated with the SSTS (-0.51; -0.61; -0.59, respectively); III) moderate to high and negatively correlated with the 10MWT (-0.69; -0.77; -0.78) and IV) negligible to moderate and positively correlated with the WHOOQoLBref domains (I-Physical health 0.46; 0.57; 0.53; II-Psychological 0.47; 0.52; 0.53; III-Social relationships 0.32; 0.36; 0.28; IV-Environment 0.46; 0.51; 0.46).

Conclusions
This study shows that there is a relationship between the BESTest and its short versions with functionality, gait speed and HRQoL in community-dwelling older people. Higher correlations were found in the short versions, especially with functionality measures. This is useful for clinical practice since these versions are simpler, require less material and are quicker to apply.

Acknowledgements
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Keywords
Correlations, Balance, Healthy ageing predictors, Older people.
in the public health system when analysing patients over 40 years of age.

**Objective**
To analyse the trend of hospitalization for COPD in Brazil from 1998 to 2016.

**Methods**
Trend analysis of hospitalization for COPD were based on data from the “Sistema de Informação Hospitalar do Departamento de Informática do Sistema Único de Saúde” (DATASUS). Simple linear regression analysis, p < 0.05. Approved by the Ethics Committee of the Universidade do Sul de Santa Catarina (UNISUL).

**Results**
In the period, 3,403,536 hospitalizations for COPD were analysed in Brazil, with a strong tendency to reduce rates (β = -6.257, p < 0.001), from 166.2/100,000 inhabitants in 1998 to 56.7/100,000 inhabitants in 2016. Among the Brazilian regions, there were higher hospitalization rates in the southern region, 461.8/100,000 inhabitants in 1998 and 133.1/100,000 inhabitants in 2016, followed by the central-west region, 222.2/100,000 inhabitants for 61.6/100,000 inhabitants. The region with the lowest rates of hospitalization was the northeast, with 69.6/100,000 inhabitants at the beginning and end of the period (180.7 and 60.6/100,000 inhabitants, respectively). All age groups analysed showed a significant reduction trend, with the largest decreases in the age groups above 60 years. In the age group of 80 years or more, there was a reduction from 3370.1/100,000 in 1998 to 1535.3/100,000 inhabitants in 2016 (β = -101,198). In females, the reduction was from 2089.1/100,000 inhabitants to 548.4/100,000 inhabitants (β = -84,372).

**Conclusions**
The trend of hospitalization for COPD in Brazil is decreasing. The southern region has the highest rates, as does the male sex. The age groups of 60 and older in both sexes present the highest rates of hospitalization, with increase proportional to the increase in age. The results indicate a change in the profile of this disease, which can be attributed to a greater coverage of the family health strategy, better monitoring of diagnosed cases, and free access to medicines dispensed by the SUS (Sistema Único de Saúde), which reduce exacerbations of the cases.

**Keywords**
Chronic Obstructive Pulmonary Disease, Hospitalization, Trends.

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**O21**
Temporal trend of the incidence of tuberculosis in the state of Santa Catarina from 2001 to 2015
Rafaela F Abreu, Bárbara O Gama, Pedro F Simão, Giovanna G Vietta, Márcia Kretzer, Fabiana O Gama
University of Southern Santa Catarina, Campus Pedra Branca, 88137-270 Palhoça, Santa Catarina, Brazil
**Correspondence:** Rafaela F Abreu (rafaela.fujii@hotmail.com)
**BMC Health Services Research 2018, 18(Suppl 2):O21**

**Background**
World Health Organization (WHO) declared Tuberculosis (TB) as a global public health emergency. TB control is a priority in Brazil.

**Objective**
To analyse the temporal trend of incidence of Tuberculosis in the State of Santa Catarina from 2001 to 2015.

**Methods**
Ecological study of time series of TB incidence trends selected from the SINAN (Information System for Notifiable Diseases) of the Ministry of Health in the population residing in the State, by sex, age groups and macro-regions. Simple linear regression was performed, p < 0.05. Study approved by the Research Ethics Committee of the Southern University of Santa Catarina.

**Results**
From 2001 to 2015, 30,213 TB cases were confirmed in Santa Catarina, with a steady trend in incidence rates, with 31.2/100,000 inhabitants in 2001 and 23.0/100,000 inhabitants in 2015 (p = 0.27). The male gender presented the highest rates, showing a strong tendency to increase, with an increase of 0.456 per year, ranging from 42.24/100,000 inhabitants in 2001 to 47.55/100,000 inhabitants, in the year 2015 (p < 0.001). In the male groups, aged from 0 to 19 years and from 20 to 29 years, a significant trend occurred in the increase of incidence rates, with an increase of 0.159 and 0.606, respectively, of the rate (p = 0.02) per year. The age group from 40 to 49 years, in turn, showed a decreasing trend, with a reduction of 1.292 in the
incidence rate per year (p = 0.001). In females, there was a reduction of 0.802 in the rate per year in the age group of 20 to 29 years (p = 0.003). The macro-regions of the Midwest, Foz do Rio Itajai and Plateau Norte presented a reduction in TB incidence rates. In the macro-regions of Greater Florianópolis and South, the trend was increasing (p < 0.05).

Conclusions
TB incidence rates in Santa Catarina are stationary. Growing trend in males. Growing trend in the male age groups up to 29 years and decreasing between 40 and 49 years. Decreasing trend in the female age group from 20 to 29 years. Macro-regions located in the coastal range have an increasing tendency and the macro-regions located in the Centre West of the State, a decreasing trend.

Keywords
Tuberculosis, Trend, Incidence.

O22
Trauma, impulsivity, suicidality and binge eating
Ana C Ribeiro, Mariana Marques, Sandra Soares, Pedro Correia, Cidália Alves, Paula Silva, Laura Lemos, Sónia Simões
Instituto Superior Miguel Torga, 3000-132 Coimbra, Portugal
Correspondence: Ana C Ribeiro (anaclaudia_aac@hotmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O22

Background
Binge eating is a public health problem with physical and psychological effects, throughout life. Several studies explored the association between some variables (e.g. shame) and binge eating symptoms, but it is important to continue exploring the contribution of other correlates.

Objective
Explore the association and the predictive role of traumatic experiences, impulsivity and suicidality with/to binge eating symptoms.

Methods
421 subjects from the general population and college students (women, n = 300, 71.3%) completed the Traumatic Events Checklist, the Binge Eating Scale, the Barratt Impulsiveness Scale and the Suicidality Scale.

Results
The values of punctual prevalence of binge eating symptoms were similar to those from recent national studies, having found a severe severity of 2.6% in the total sample (3.3% in women). In both genders, suicidality total score and the body mass index (BMI) associated with binge eating total score. Only in women this score correlated with sexual and family trauma total scores and with the total score of traumatic events. If in men suicidality total score associated with family trauma total score and with the total score of traumatic events; in women that score also correlated with sexual trauma total score. In men, binge eating total score associated to attentional impulsivity (one of the first order impulsivity factors) and, in women, to all the first order impulsivity factors (attentional impulsivity, motor and non-planning), and with all the second order impulsivity factors (psychological attention, cognitive instability, motor, self-control and cognitive complexity), with the exception of perseverance. In women, attentional impulsivity particularly associated with sexual and family trauma total scores and with the total score of traumatic experiences. In women, the BMI, suicidality and attentional impulsivity total scores were the binge eating total score predictors.

Conclusions
In a sample from the general population and college students, we found that it is salient and of importance for future interventions, mainly in women, the predictive role of BMI, suicidality and attentional impulsivity scores to binge eating symptoms, with traumatic events (a more distal correlate) revealing significant associations, but not predicting these symptoms.

Keywords
Traumatic events, Impulsiveness, Suicidality, Binge eating.

O23
Computerized respiratory sounds during acute exacerbations of chronic obstructive pulmonary disease
Ana Oliveira1,2, Patrícia Rebelo1, Lilia Andrade4, Carla Valente5, Alda Marques1,2
1Faculty of Sports, University of Porto, Porto 4200-450 Portugal; 2Respiratory Research and Rehabilitation Laboratory, School of Health Sciences, University of Aveiro, 3810-193 Aveiro, Portugal; 3Institute for Research in Biomedicine, University of Aveiro, 3810-193 Aveiro, Portugal; 4Pulmonology Department, Baixo Yovga Hospital Center, 3810-501 Aveiro, Portugal
Correspondence: Ana Oliveira (aio@ua.pt)
BMC Health Services Research 2018, 18(Suppl 2):O23

Background
Timely treatment and adequate monitoring of acute exacerbations of chronic obstructive pulmonary disease (AECOPD) have shown to reduce hospital admissions and recovery time, while improving patients’ quality of life [1]. Nevertheless, this is challenging as AECOPD diagnosis/monitoring relies exclusively on patients’ reports of symptoms worsening [2]. AECOPD are characterised by an increased airway inflammation and obstruction, abnormal bronchial mucus and air trapping, which results in changes in lung acoustics [2,3]. Thus, changes in respiratory mechanics related with AECOPD may be successfully monitored by respiratory sounds, namely adventitious respiratory sounds (ARS, crackles and wheezes) [3]. Nevertheless, little is known on ARS changes during the time course of AECOPD.

Objective
To evaluate ARS changes during the time course of AECOPD.

Methods
25 non-hospitalised patients with AECOPD (16 males, 70.0 ± 9.8yrs, FEV1 54.2 ± 20.6% predicted) were enrolled. Patients were treated with pharmacological therapy. ARS at anterior and posterior right/left chest were simultaneously recorded at hospital presentation (T1) and at weeks 3 (T3) and 8 (T8). ARS (no. of crackles and wheeze occupation rate-%Wh) were processed, per respiratory phase, using validated algorithms [4,5]. Differences were examined with Friedman and Cochran tests and both tests were corrected with Bonferroni corrections.

Results
Significant differences were found in no. of inspiratory crackles (0.6 [0.1-2.2] vs. 0.5 [0.1-2.5] vs. 0.3 [0.0-0.9]; p = 0.008) in T1, T3 and T8 at posterior chest, namely participants presented more inspiratory crackles (p = 0.013) at T1 than at T8. Similar results were found for inspiratory %Wh (0.0 [0.0-12.3] vs. 0.0 [0.0-0.0] vs. 0.0 [0.0-0.0]; p = 0.019), namely, participants presented significantly more inspiratory %Wh at T1 than at T3 (p = 0.006). A significant higher number of participants presenting inspiratory wheezes was found at T1 than at T3 at the anterior chest (%Wh: 10 vs. 2 vs. 5; p=0.017) and a trend to significance was found at posterior chest (%Wh: 10 vs. 3 vs. 4; p = 0.052). No differences were found for the remaining variables.

Conclusions
Crackles and wheezes seem to be sensitive to monitor the course of AECOPD. Inspiratory crackles seem to persist until 15 days after the exacerbations (i.e., approximate time needed to resolve AECOPD) whilst inspiratory %Wh significantly decreased after this period. This information may allow further advances in the monitoring of patients with COPD across all clinical and non-clinical settings, as respiratory sounds are simple, non-invasive population-specific and available by nearly universally means. Further studies with larger samples and including data collected before the AECOPD are needed to confirm these findings.

References


Keywords
Chronic Obstructive Pulmonary Disease, Acute exacerbations, Computerised respiratory sounds, Crackles, Wheezes.

O24
Trauma, self-disgust and binge eating
Sandra Soares, Mariana Marques, Ana C Ribeiro, Pedro Correia, Cidália Alves, Paula Silva, Helena E Santo, Laura Lemos
Instituto Superior Miguel Torga, 3000-132 Coimbra, Portugal
Correspondence: Sandra Soares (sandra.soares.93@hotmail.com)
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Background
Binge eating disorder is finally recognized in the current Diagnostic and Statistical Manual of Mental Disorders-5. Additionally, international and national studies explored correlate binge eating symptoms, but it is important to evaluate the role of other variables for these symptoms, in the general population.

Objective
Explore the association and predictive role of traumatic experiences and of self-disgust with/in binge eating symptoms, exploring, also, the possible mediation role of self-disgust in the relation between traumatic experiences and those symptoms.

Methods
421 subjects from the general population and college students (women, n = 300, 71.3%) completed the Traumatic Events Checklist, the Binge Eating Scale and the Multidimensional Self-disgust scale.

Results
We found binge eating (BE) similar to those from other national studies: mild to moderate BE (women: 6.3%; men: 5.0%) and severe BE (women: 3.3%; men: 0.8%). In men, BE total score positively correlated with defensive activation, cognitive-emotional and avoidance dimensions and negatively with family trauma. In women, BE total score positively associated with all self-disgust dimensions. Sexual trauma, family trauma, total of traumatic events and BMI positively associated with BE total score and all the self-disgust dimensions. In a hierarchical multiple regression analysis, BMI, total of traumatic events and the cognitive-emotional of self-disgust predicted BE total score. The cognitive-emotional (self-disgust) dimension mediated totally the relation between traumatic events and the BE total score.

Conclusions
In a sample from the general population and college students, BE values were similar to those from national studies. In women, sexual trauma, family trauma and total traumatic experiences (and all self-disgust dimensions) associated with BE. A higher BMI was associated with higher BE levels. In future interventions focusing on BE, in women, it seems important to consider the role of cognitive-emotional self-disgust in the relation between BE occurrence and distal traumatic events.

Keywords
Traumatic events, Self-disgust, Binge eating.

O25
New paediatric screening procedures: health promotion in primary care
Marisa Lousada1,2, Ana P Mendes3,4, Helena Loureiro1,5, Graça Clemêncio1, Elsa Melo1,5, Ana RS Valente1
1School of Health Sciences, University of Aveiro, 3810-193 Aveiro, Portugal; 2Center for Health Technology and Services Research, University of Aveiro, 3810-193 Aveiro, Portugal; 3Health Sciences School, Polytechnic Institute of Setúbal, 2914-503 Setúbal, Portugal; 4Centro Interdisciplinar de Investigação Aplicada em Saúde, Polytechnic Institute of Setúbal, 2914-503 Setúbal, Portugal; 5Health Sciences Research Unit: Nursing, Nursing School of Coimbra, 3046-851 Coimbra, Portugal; 6ACES Baixo Vouga, 3804-502 Aveiro, Portugal
Correspondence: Marisa Lousada (marisalousada@ua.pt)
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Background
Screening procedures do not identify the specific disorder but allow a quick identification of children who may need a detailed assessment in speech therapy. Screening instruments are usually performed by different health professionals (e.g. pediatricians, nurses). The Child Health Program for primary care in Portugal determined that all 5-year-old children should be screened by nurses and general practitioners to conclude if they present a typical development suitable to school requirements. This screening is usually implemented through the Mary Sheridan test and there is no speech-language screening test used in primary care. Recently a Speech and Language Screening was validated for Portuguese children in kindergartens with excellent levels of specificity, sensitivity and reliability. RALF aims to quickly identify (5 minutes) children who may be at risk of speech-language impairment and need to be referred to a in depth assessment through a Speech-Language Therapist.

Objectives
This study aims to implement a new screening procedure in primary health care contributing to best practices. Specifically, the study aims to identify children with speech-language disorder that are undiagnosed due to the absence of a known condition such as neurological, hearing or cognitive impairment.

Methods
Ethical approval was granted by the Ethics Committee (UIUCSA) (ref.14/2016). A sociocultural questionnaire characterizing child and family background was fulfilled by caregivers to collect information about the child’s background (e.g., mother language; neurological, hearing, cognitive disorder) and child’s family background. Subject selection criteria included: Portuguese as native language and absence of a language disorder secondary to a known condition. The sample comprised 37 children whose parents returned informed consents. The screening was applied by 10 nurses in the Global Health Examination of 5 years old children in 2 health care centres.

Results
Twenty-one percent of children failed the screening. This illustrates the high level of speech-language difficulties (without any other associated condition) and is consistent with previous research studies. The children that failed the screening were already been referred to speech-language services for a detailed assessment.

Conclusions
This study highlights the importance of the implementation of a screening procedure in primary health care contributing to best practices.
Acknowledgements
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Keywords
Screening, Speech and language, Health promotion.

O26
Practices on using wearables during aquatic activities
Henrique P Neiva1,2, Luís Faíl 1, Mário C Marques1,2, Maria H Gil1,2, Daniel A Marinho1,2
1Department of Sport Sciences, University of Beira Interior, 6201-001 Covilhã, Portugal; 2Research Center in Sports Sciences, Health Sciences and Human Development, 6201-001 Covilhã, Portugal
Correspondence: Henrique P Neiva (henriquepn@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O26

Background
Several studies described the use of different sensors to detect the daily activity, movement and sleep patterns and physical activities [1]. These are easily available for all those who are interested in tracking physical activity and progresses to improve physical fitness and health-related parameters [1]. However, little is known about the people's knowledge about this equipment and specially in some specific activities that have some restrictions, for instance those performed in-water.

Objective
The purpose of this study was to characterize Portuguese practices on the use of wearable technology during aquatic activities.

Methods
Swimming pools from the interior region of Portugal were selected randomly and their users completed a questionnaire consisting of 33 questions. The first part focused on the characterization of their motivations and usual in-water activities, and the second focused on their views on the value of the wearable technology, its use and suggestions for future development of those devices according to aquatic activities.

Results
Ten swimming pools were accessed, and 418 questionnaires were filled by people ranging from 18 to 79 years-old. About 79% of these subjects have heard about wearables for sport, but 65% never used them during exercise. At the time of the inquiries, 24% still used and 60 (M = 25.66; SD = 8.50), who completed validated self-report measures. The relationship between the study variables was assessed by Pearson product-moment correlation and the moderator effect was tested through path analysis.

Conclusions
For future, the devices should be more comfortable, be more reliable, be water resistant, with longer battery life. Besides the usual feedbacks provided, they also would like to see some technical corrections regarding body weight and shape. These findings suggested that caregiver restrictive/critical eating messages exacerbated the impact of shame on these psychopathological outcomes, with the tested model accounting for 17% and 29% of the variance of inflexible eating rules and body weight and shape, respectively.

Methods
The sample comprised 479 Portuguese women, aged between 18 and 60 (M = 25.66; SD = 8.50), who completed validated self-report measures. The relationship between the study variables was assessed by Pearson product-moment correlation and the moderator effect was tested through path analysis.

Results
Results revealed that caregiver restrictive/critical messages played a significant moderator effect on the relationships of external shame with inflexible eating rules and with concerns and maladaptive attitudes regarding body weight and shape.

Conclusions
These findings appear to offer important clinical and investigational implications, highlighting the importance of the development of efficient parental intervention approaches as a refuge against maladaptive eating regulation strategies.

References
Keywords
Caregiver eating messages, External shame, Inflexible eating rules, Eating disordered, Women.

O28
How does shame mediate the link between a secure attachment and negative body attitudes in men?
Sara Oliveira, Cláudia Ferreira
Cognitive and Behavioural Centre for Research and Intervention, University of Coimbra, 3000-115 Coimbra, Portugal
Correspondence: Sara Oliveira (sara.oliveira.uc@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O28

Background
Shame is a painful self-conscious and universal emotion [1] regarded as a central feature of the development and maintenance of body image difficulties [2]. Additionally, it’s known the association between attachment style and body concerns, among women [3]. Particularly, a secure attachment may promote a more favourable body image [4]. However, few studies have focused on mechanisms that may explain body image difficulties in men.

Objective
The present study tested a model which hypothesized that the impact of a secure attachment on the engagement in negative male body attitudes, namely attitudes towards their masculinity and body fat [5, 6], is carried by general feelings of shame [7], while controlling the effect of body mass index.

Methods
The sample comprised 133 men, aged between 18 and 60 years old (M = 28.83; SD = 10.24), who completed validated self-report measures. The relationship between the study variables was assessed by Pearson product-moment correlation and the mediator effect was conducted through path analysis.

Results
The tested path model explained 22% and 49% of negative male attitudes towards their masculinity and low body fat variance, respectively. Results suggested that a secure attachment presented a significant direct effect on attitudes towards body fat, and an indirect effect through external shame on attitudes towards masculinity. In fact, these findings seem to suggest that men who were secure in attachment tend to experience less general feelings of shame and, consequently, presented low negative body attitudes, namely in regard to their masculinity and body fat.

Conclusions
These data support the relevance of addressing shame experiences when working with men with body image related-difficulties, especially in a context of early adverse experiences in their attachment.

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O29
Potential contamination of tourniquets used in peripheral venipuncture: preliminary results of a scoping review
Ana Isabel S Oliveira¹, Pedro Ferreira², Nádia Osório³, Paulo Costa³, Vânia Oliveira¹, Fernando Gama³, João Graveto¹
¹Health Sciences Research Unit; Nursing, School of Nursing, University of Coimbra; Coimbra, 3046-851, Portugal; ²Coimbra Health School, Polytechnic Institute of Coimbra, Coimbra, 3046-854, Portugal; ³Coimbra Hospital and University Centre, 3000-075 Coimbra, 3000-075, Portugal
Correspondence: João Graveto (jgraveto@esenfç.pt)
BMC Health Services Research 2018, 18(Suppl 2):O29

Background
Peripheral venipuncture constitutes one of the most frequent and invasive clinical procedures performed in healthcare settings [1-2]. In order to stop blood flow and promote vascular distension, the use of a tourniquet five to ten centimetres above the desired puncture site is recommended [3]. The irregular management of these specific medical devices, without complying with guidelines, constitutes a risk of microorganism dissemination [4-5].

Objective
To map the available evidence on the microbiological contamination of tourniquets used in peripheral venipuncture, identifying recurrent practices in their manipulation.

Methods
Scoping review based on the principles advocated by Joanna Briggs Institute [6]. The analysis of relevance of the articles, the extraction and synthesis of data was performed by two independent reviewers. The search strategy included all articles published until November 2017, written in Portuguese, Spanish, French and English.

Results
An initial total of 2,052 articles derived from the search conducted. Through Endnote software, 998 duplicates were removed. The remaining 1,054 articles were screened by title and abstract. Of these, 33 articles were included for full-text analysis by two independent reviewers. During this process, the reference lists of all included articles were screened, which resulted in the inclusion of 3 new articles. Ten studies were excluded due to absence of microbiological data inclusion and 6 were excluded due to lack of full-text access and author’s reply. Overall, a total of 1,337 tourniquets belonging to nurses, nursing assistants, doctors, phlebotomists and lab workers were analysed for microorganism contamination. A small number of studies verified that the same tourniquets were used continuously by professionals between 3 days to 104 weeks. Preliminary results evidenced contamination rates varying between 9% and 100%, composed by diverse microorganisms such as Staphylococcus aureus, Escherichia coli, Pseudomonas aeruginosa,
Enterococcus and Acinetobacter baumannii. Several of the included studies described conflicting practices during tourniquet manipulation by health professionals, especially when focused on domains such as hand hygiene before and after tourniquet use, glove usage during venipuncture, tourniquet cleaning and disinfecting, sharing tourniquets with other professionals and storage conditions. The most cited reason for tourniquet replacement in clinical settings was due to their loss by health professionals.

Conclusions
As a contribution to clinical practice, it is expected that the mapping of the available scientific evidence regarding the potential contamination of these devices will appear as an informative contribution that supports the analysis of current practices in this field, promoting the implementation of quality assurance systems in health institutions.

Acknowledgements
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References

Keywords
Tourniquets, Contamination, Peripheral venipuncture.

O30
Effects of a community-based food education program on nutrition-related knowledge in middle-aged and older patients with type 2 diabetes: a RCT
Carlos Vasconcelos1,2, António Almeida1, Maria Cabral3, Elisabete Ramos4,5, Romeu Mendes1,3,5
1University of Trás-os-Montes and Alto Douro, 5000-801 Vila Real, Portugal; 2Polytechnic Institute of Viseu, 3504-510 Viseu, Portugal; 3Instituto de Ciências da Saúde Pública, Universidade do Porto, 4050-600 Porto, Portugal; 4Faculty of Medicine, University of Porto, 4200-319 Porto, Portugal; 5Public Health Unit, ACES Douro I – Marão e Douro Norte, 5000-524 Vila Real, Portugal
Correspondence: Romeu Mendes (romeuبشرemendes@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O30

Background
Peripheral Diabetes imposes an unacceptably high human, social and economic cost, especially on aging populations. Nutrition-related knowledge is of crucial importance to make healthier food choices, contributing for type 2 diabetes (T2D) control and related comorbidities prevention.

Objective
To analyse the effects of a food education program (FEP) on the nutrition-related knowledge (NRK) in middle-aged and older patients with T2D.

Methods
Forty-two individuals aged 50 and 80 years old with T2D were recruited in primary health care institutions, to participate in Diabetes em Movimento®, a community-based exercise program (3 exercise sessions per week; 75 minutes each; during 9 months), developed in Vila Real, Portugal. Participants were randomized into two groups: a control group (CG; N = 19; exercise program only) and an experimental group (EG; N = 23; exercise program plus a FEP). The FEP was 16 weeks long and, on each week, a different nutrition-related theme was addressed. Each theme was driven through a theoretical session (15 minutes) and dual-task exercise strategies integrated in Diabetes em Movimento®’s sessions. The NRK was evaluated, before and after the 9-month intervention, using the Portuguese reduced version of Nutritional Knowledge Questionnaire (from 0 to 56 points; higher score, better knowledge).

Results
Thirty-six participants completed the study (CG, N = 16; EG, N = 20).

O31
Perception of oral antiadibetic agents adverse events and their impact on Health Related Quality of Life in type 2 diabetic patients
Rui S Cruz1, Luiz M Santiago2, Carlos F Ribeiro3
1Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal; 2Faculty of Medicine, University of Coimbra, 3004-504 Coimbra, Portugal; 3Department of Pharmacology and Experimental Therapeutics, Faculdade de Medicina, University of Coimbra, 3004-504 Coimbra, Portugal
Correspondence: Rui S Cruz (ruic@estecoimbra.pt)
BMC Health Services Research 2018, 18(Suppl 2):O31

Background
Currently, drug therapy with oral antidiabetic agents, is capable of inducing normoglycemia levels able to decrease the risk of complications associated with diabetes mellitus. However, it is also known that the various existing oral antidiabetic agents may trigger a large number of adverse events, either alone or in combination. Some of these tolerability and safety issues related to oral antidiabetic agents are reported by patients and can influence negatively or satisfaction with treatment or glycaemic control, or the therapeutic adherence and maintenance. It is therefore very important the role of patients in monitoring adverse events related to the use of the oral antidiabetic drugs in order to optimize treatment and improve the quality of life of patients with type 2 diabetes (DM2).

Objective
The aim of this study was to determine the prevalence of adverse events associated with use of oral antidiabetics and assessing their impact on Health-related Quality of Life (HRQoL) of diabetic patients tracked in primary health care.

Methods
A total of 357 DM2 patients were enrolled in observational and cross-sectional study, recruited in six Health Care Centres/Family Health Units (FHU) of the central region of Portugal. Data collection...
comprised three questionnaires to measure the prevalence of adverse events, the diabetes health profile (DHP-18) and EQ-SD-3L.

**Results**

Results showed that the highest prevalence of adverse events is in the DipeptidylPeptidase-4 Inhibitors followed by Metformin+Sitagliptin (fixed dose) and Metformin+Vildagliptin (fixed dose) therapeutic classes. We also found that all correlations between different variables were statistically significant (p < 0.001).

**Conclusions**

Thus, we conclude that patients who show a greater number of adverse events tend to have poorer health profiles, worse general health and also lower health-related quality of life.

**Keywords**

Diabetes Medication, Therapy, Quality of Life.

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**O32**

**Third stage of waterbirth: observational study**

Joyce CS Camargo1,2, Vitor Valeara3, Elisabete Santos5, Natalucia M Araujo4, Kelly CMP Venâncio1, Manuela Nêné2, Maria CLR Grande3

1Abel Salazar Institute of Biomedical Sciences of the University of Porto, 4200-135 Porto, Portugal; 2School of Arts, Sciences and Humanities, University of São Paulo, 03828-000 São Paulo, Brazil; 3São Bernardo Hospital, 2910-445 Setúbal, Portugal; 4College of Nursing, University of São Paulo, 05403-800 São Paulo, Brazil; 5Escola Superior de Saúde da Cruz Vermelha Portuguesa, 1350-125 Lisboa, Portugal; 6Faculty of Psychology and Educational Sciences, University of Porto, 4200-135 Porto, Portugal

**Correspondence:** Joyce CS Camargo (joyce@usp.br)

**BMC Health Services Research 2018, 18(Suppl 2):O32**

**Background**

The placental-delivery, in waterbirth (WB), usually occurs while maternal wellbeing is monitored through clinical aspects, heart-rate and blood-pressure, as well as water-coloration. Adequate care should be taken in this period, with prevention of postpartum haemorrhage (PPH), which is the main cause of maternal death in developing countries, and approximately ¼ of all maternal deaths worldwide [1].

**Objective**

To verify the outcome of the labour’s third stage at the Waterbirth-Project (PWB), in Setúbal, at São Bernardo’s Hospital located in Portugal. Study’s question: What’s the maternal outcome of childbirth’s 3rd stage in PWB?

**Methods**

Observational-study, cross-sectional, descriptive based on ethical guidelines (CNPD-9885/2015) approved by the hospital, where delivery room’s infrastructure, protocol’s definition and technical and scientific training of the obstetric-team began in 2006. The PWB occurred between 2011-2014. 153 women, with a single pregnancy, gestational age ≥ 37 weeks with low-risk prenatal care participated in the PWB, signed an informed consent form about study’s benefits and risks, resulting in 90 waterbirths. Data were collected from the specific PWB forms in April 2016. Data management was developed in Excel® and SPSS® version 16.0 programs.

**Results**

In the PWB, 51.1% of women had placental waterbirth vs 48.9% out-of-water. The active management occurred in 7.7% vs 86.7% of physiological management, 92.3% of the women had physiological blood loss, and 7.7% had increased bleeding, controlled with uterotonic. These results corroborate with evidence: Swiss study [2], with 89 WB vs 279 out-of-water births, 57% had physiological defect in the water and the 3rd-Stage was significant (p < 0.01) in PA; English study [3] with 5,192 WB, with third physiological stage, 86.1% of which 55.8% were in water. For 3rd-Stage’s management [4]: 1. Active: administration of uterotonic (oxytocin [1], 1st choice) after birth, timely clamping of the umbilical cord and controlled cord traction. 2. Physiological: Spontaneous relief assisted by gravity and/or maternal effort. In order to evaluate PPH in WB, in addition to the clinical state of the puerperium, the coloration of the comparison to wine is analyzed: 50-100 ml blood loss to the pink-Chablis; from 150-250 ml to bleed and 500-750 ml to Merlot-wine [5] or, study-site midwife’s puts-hand below the surface of the water horizontally. If visible hand, haemorrhage ≤ 500mL, if hand not-visible, haemorrhage > 500mL.

**Conclusions**

The 3rd-Stage’s management in WB is safe and according to the experience of the PWB, no adverse events were related to it. More studies are needed to support good clinical practices based on scientific evidence.

**References**


**Keywords**

Childbirth’s 3rd stage, Placental-delivery, Postpartum-haemorrhage, Waterbirth, Midwifery.

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**O33**

**Aqua apgar in waterbirth: cross-sectional study**

Joyce CS Camargo1,2, Vitor Valeara1, Elisabete Santos4, Maria AJ Belli2, Maryam MJ Trintinália1, Manuela Nêné2, Maria CLR Grande3

1Abel Salazar Institute of Biomedical Sciences of the University of Porto, Portugal; 2School of Arts, Sciences and Humanities, University of São Paulo, 03828-000 São Paulo, Brazil; 3São Bernardo Hospital, 2910-445 Setúbal, Portugal; 4College of Nursing, University of São Paulo, 05403-800 São Paulo, Brazil; 5Escola Superior de Saúde da Cruz Vermelha Portuguesa, 1350-125 Lisboa, Portugal; 6Faculty of Psychology and Educational Sciences, University of Porto, 4200-135 Porto, Portugal

**Correspondence:** Joyce CS Camargo (joyce@usp.br)

**BMC Health Services Research 2018, 18(Suppl 2):O33**

**Background**

Waterbirth (WB) is the complete underwater fetal expulsion [1,2] with much discussion [3] about it. Aqua Apgar [4] is an index that evaluates the newborn’s vitality (NB) while still submerged in water until life’s first minute, developed by Cornelia Enning.

**Objective**

To know the neonatal outcome of the Waterbirth Project (PWB) at a Setubal’s (Portugal) Hospital, São Bernardo, Study’s Question: What is the neonatal outcome of new-born born in PWB?

**Methods**

Cross-sectional study, observational, descriptive based on ethical guidelines (CNPD-9885/2015) approved by the hospital, whose delivery-room’s infrastructure, protocol’s definition and obstetric-team’s technical and scientific training began in 2006. The PWB occurred between 2011-2014. 153 women with single pregnancy, gestational age ≥ 37 weeks with low-risk prenatal care participated in the PWB and signed an informed consent form about study’s benefits and risks, resulting in 90 waterbirths. Data were collected from the specific PWB form in April 2016. Data management was developed in Excel® and SPSS® version 16.0 programs.

**Results**

The 1st minute’s Aqua Apgar and the 5th minute’s Apgar were superior to 7 in all the cases, with an average of 9.4 at the 1st minute and 9.9 at the 5th minute. A cross-sectional-study in Sydney [5] observed minor Apgar and may be due to disregarding that water-born NB manifest their vitality by moving the legs and arms, opening and closing their eyes and mouth and swallowing [4]. A cohort study in the UK [6] corroborates our study that NB of aquatic birth were less likely to have a low Apgar score in the 5th minute. The use of Aqua
Apgar in our study allowed a coherent outcome in the NBs who is kept submerged in water until life’s first minute, with a soft transition to extra uterine life and with no negative repercussions on heart rate and absence of complication or neonatal hospitalization.

Conclusions
This study provides evidences that may support clinical decisions regarding delivery in water. Further studies on Aqua Apgar should be conducted to support evidence-based practices.

References
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Conclusions
This study provides a general overview about the health profile of Portuguese centenarians in two types of communities: one rural and with low population density, and another in an urban context. Our findings raise important differences between centenarians from the two samples, which reinforce the heterogeneity of this population, and. A “importance of environmental factors in how human beings adapt to advanced age was achieved. Findings highlight the need for potentially distinctive health promotion initiatives in these two settings.

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O34
Portuguese centenarians from Oporto and Beira Interior: distinctive health profiles?
Daniela Brandão1,2, Oscar Ribeiro1,3, Rosa M Afonso1,4, Constança Paúl1,5
1Center for Health Technology and Services Research, 4200-450 Porto, Portugal 2Faculty of Medicine, University of Porto, 4200-319 Porto, Portugal 3University of Aveiro, 3810-193 Aveiro, Portugal 4University of Beira Interior, 6201-001 Covilhã, Portugal 5Institute of Biomedical Sciences Abel Salazar, University of Porto, 4050-313 Porto, Portugal
Correspondence: Daniela Brandão (danielafsbrandao@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O34

Background
In Portugal, the number of centenarians almost tripled over the last decade from 589 centenarians in 2001 to 1526 in 2011 [1], and recent projections point to the existence of 3,393 centenarians in 2013 [2]. Reaching the age of 100, though an important landmark, does not necessarily indicate successful aging as it is often accompanied by severe health and functional constraints. Understanding health trajectories of these long-lived individuals and studying the prevalence of diseases that are the most common causes of death is important for conveniently addressing their current caregiving needs.

Objective
The aim of this study is to present an overview of the sociodemographic and health-related characteristics of two distinct samples of Portuguese centenarians (predominantly rural vs. predominantly urban) and acknowledge potential dissimilarities.

Methods
A sample of 241 centenarians was considered (140 from the PT100 Oporto Centenarian Study and 101 from the PT100 Beira Interior Centenarian Study). Sociodemographic information, nature and number of diseases, functionality and physical health variables were collected.

Results
In both samples, most centenarians were female (89.3% in Oporto, and 86.1% in Beira Interior), and widowed (76.4% in Oporto, 91.1% in Beira Interior), and lived in the community (57.9% in Oporto, 49.0% in Beira Interior). Higher levels of basic activities of daily living (BADL) and instrumental activities of daily living (IADL) dependency were found in the Oporto sample, as well as a higher percentage of bedridden centenarians (61.0% in Oporto vs. 38.1% in Beira Interior). Sensory impairments and incontinence were the most frequent conditions reported in both samples; however, lower percentages of age-related illnesses were found in the Beira Interior sample. Considering the three most lethal diseases among the elderly population (heart disease, non-skin cancer and stroke), 60.0% of centenarians in Oporto escaped these conditions, whereas in Beira Interior this percentage increases to 85.4%.

Conclusions
This study provides a general overview about the health profile of Portuguese centenarians in two types of communities: one rural and with low population density, and another in an urban context. Our findings raise important differences between centenarians from the two samples, which reinforce the heterogeneity of this population, and. A "importance of environmental factors in how human beings adapt to advanced age was achieved. Findings highlight the need for potentially distinctive health promotion initiatives in these two settings.

Acknowledgements
This work was supported by the Portuguese Foundation for Science and Technology (FCT) [PHD Grant for the first author - SFH/BD/101595/2014]. The PT100 Oporto Centenarian Study was supported by the Portuguese Foundation for Science and Technology (FCT; Grant Pest – C/SAU/UI0688/ 2011 and C/SAU/UI0688/2014).

References

Keywords
Centenarians, Health, Functionality, Diseases, Portugal, Morbidity.

O35
Implementation of an educational program to promote functionality in medical wards: quasi-experimental study
João Tavares1,2, Joana Grácio3, Lisa Nunes4
1Nursing School of Coimbra, Coimbra, 3046-851, Portugal 2Coimbra School of Education, Polytechnic Institute of Coimbra, 3030-329, Portugal 3Coimbra Hospital and University Hospital Centre, 3000-075 Coimbra, 3000-075, Portugal
Correspondence: João Tavares (enf.joaoptavares@hotmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O35

Background
Functional decline, diminished performance in at least one activity of daily living, is often of 30 to 60% among hospitalized older adults (OA) [1]. Quality nursing care is essential to prevent functional decline. A new "theoretically based philosophy of care has been proposed: the Function Focused Care (FFC), which is geared toward optimization of function and physical activity during all personal/care related activities that occur throughout the hospital stay [2]. The FFC has demonstrated better outcomes at discharge and post-acute periods.

Objective
To evaluate the effect of an educational program for nurses in promoting the FFC among hospitalized OA.

Methods
This is a prospective quasi-experimental study developed in four internal medical units. These units were randomly selected in two units for case (intervention) and two for control. Participants were 117 OA and 94 registered nurses (RN). Intervention consisted in the development and implementation of an educational program about FFC to RN, lasting 10 hours, and a maintenance program, during 5 months.
Further details about the program can be found in Tavares et al [3]. Implementation of FFC activities by RN was assessed through the FFC Behaviour Checklist, which was completed by the researchers through non-participant observation [4]. The measures for patients were the functional decline (DF) assessed by the Katz Index: difference between baseline and discharge (t0), discharge and follow-up of 3 months (t1) and baseline and follow-up (t2). For comparison of the case and control groups, an independent t-test was calculated.

Results
The patient's sociodemographic and clinical characteristics showed no statistical differences between groups. The provision of FFC mean was 0.46 ± 0.22, indicating that RN promoted only 46% of total possible FFC activities. Significant statistical differences were found between case and control group (t(91)) = -2.85; p = 0.01), with means of 0.52 ± 0.24 and 0.39 ± 0.19, respectively. No statistical difference was found between the promotion of FFC and the functional decline at t0 (U = 30.5, p = 0.15), t1 (t(38.82) = 6.293; p < 0.15) or t2 (t(83) = 2.49; p = 0.94).

Conclusions
Promotion of functionality is very low, which could be explained by the lack of impact in FD prevention. However, in the case group, more FFC activities were developed. These results suggest a positive impact of the educational program in OA care. The FFC can be seen as a challenge and opportunity for change, innovation, and creativity, in order to improve the effectiveness, efficiency, and quality of care of hospitalized OA.

References

Keywords
Function focused care, Older adults, Hospitalization program, Educational program.

O36
Self-reported data and its relation to the standard and validated measures to predict falls
Anabela C Martins, Catarina Silva, Juliana Moreira, Nuno Tavares
Physiotherapy Department, Coimbra Health School, Polytechnic Institute of Coimbra, 3026-854 Coimbra, Portugal

Correspondence: Anabela C Martins (anabelamartins@estescoimbra.pt)
BMC Health Services Research 2018, 18(Suppl 2):O36

Background
According to National Institute for Health and Care Excellence quality standards, the assessment of fall risk and preventing falls should be multifactorial and include self-reported questions like fall history, fear of falling (FoF), self-perception of functional ability, environment hazards, gait pattern, balance, mobility and muscle strength [1]. Concerning the self-reported data, some studies described subjectivity and difficulty in extracting reliable information when using such methods. History and number of previous falls are often used as golden standard in fall risk assessment studies [2]; however, these questions are source of misjudgement, in part, due to difficulty for an older person remember exactly how many times he/she had fallen in a past period of time.

Objective
The study aimed to compare self-reported questions and standard and validated measures for screening risk of fall to verify the confidence of the self-reported data.

Methods
506 community-dwelling adults aged 50+ years old (mean age 69.56 ± 10.29 years old; 71.7% female) were surveyed regarding demographics, history of fall, FoF, sedentary lifestyle, use of upper-extremities to stand up from a chair, by self-reported questionnaire; analysis of gait, balance and muscle strength, by standard and validated measures for screening risk of fall - 10 meters walking speed test [3], Timed Up & Go test [4] and 30 second sit to stand test [4], respectively. Independent samples t tests were performed to compare groups.

Results
33.2% of the sample reported at least one fall in the last year (fallers), 50% reported FoF, 46.4% sedentary lifestyle, 31.8% needed their upper extremities assistance to stand from a chair. Fallers demonstrated lower scores of gait velocity (p < 0.001), lower extremities strength (p < 0.001) and balance (p = 0.034) compared with non-fallers; who reported sedentary lifestyle also showed lower scores of gait velocity (p < 0.001), lower extremities strength (p = 0.001) and balance (p < 0.001) compared with non-sedentary. Simultaneously, who assumed FoF showed lower scores of gait velocity (p < 0.001), lower extremities strength (p < 0.001) and balance (p < 0.001) compared with who had no FoF. Finally, those who use the upper-extremities to stand up from a chair showed lower scores of gait velocity (p < 0.001), lower extremities strength (p < 0.001) and balance (p < 0.001) compared with those who do not.

Conclusions
The findings suggest that self-reported data like history of falls, sedentary lifestyle, FoF and use of upper extremities to stand up from a chair, obtained by simple questions, have emerged as reliable information on risk factors for falling and can be used to complete the fall risk screening.

Acknowledgements
Authors would like to thank all participants and centres, clinics and other entities hosting the screenings. Financial support from project FallSensing: Technological solution for fall risk screening and falls prevention (POCI-01-0247-FEDER-003464), co-funded by Portugal 2020, framed under the COMPETE 2020 (Operational Programme Competitiveness and Internationalization) and European Regional Development Fund (ERDF) from European Union (EU).

References

Keywords
Self-reported data, Fall Risk Assessment, Community dwelling adults.

O37
Life after falling: which factors better explain participation in community dwelling adults?
Juliana Moreira, Catarina Silva, Anabela C Martins
Physiotherapy Department, Coimbra Health School, Polytechnic Institute of Coimbra, 3026-854 Coimbra, Portugal

Correspondence: Juliana Moreira (julianamoreira@estescoimbra.pt)
BMC Health Services Research 2018, 18(Suppl 2):O37
Background
Participation is defined by World Health Organization (WHO), as the person’s involvement in a life situation [1]. There are few studies exploring the association between participation restriction and being older, exhibiting more depressive moods, poor mobility, and a lack of balance confidence [2,3].

Objective
The objective of this study was to identify which factors, namely, age, functional capacity and self-efficacy for exercise have the best association with participation.

Methods
A sample of 168 community-dwelling adults (age ≥50 years), mean age 70.45 ± 10.40 years old (78.6% female), with history of at least one fall in the previous year, participated in the study. Measures included demographic variables, functional capacity, assessed by six functional tests: Grip strength, Timed Up and Go (TUG), 30 seconds Sit-to-Stand, Step test, 4 Stage Balance “modified” and 10 meters Walking Speed and two questionnaires (Self-efficacy for exercise and Activities and Participation Profile related to Mobility - PAPM). Descriptive and correlational statistics were performed to analyse data.

Results
Fifty-nine percent of participants presented restrictions in participation (34.8% mild restrictions, 17.4% moderate restrictions and 6.8% severe restrictions); Participation showed a strong correlation with 10 meters walking speed (r = -0.572) and TUG (r = 0.620) for a significance level p < 0.001. A moderate correlation was found between participation and 30 seconds Sit-to-Stand (r = -0.478), Step test (r = -0.436), Grip strength (r = -0.397), 4 Stage Balance test “modified” (r = -0.334), as well as, Self-efficacy for exercise (r = -0.401) and age (r = 0.330), for a significance level p < 0.001.

Conclusions
This study suggests that participation of individuals with history of fall is associated with functional capacity, self-efficacy for exercise and age. Previous studies have showed comparable findings [4,5,6], however, admitting the strong association between participation and 10 meters Walking Speed and TUG, it is essential to include these instruments in a comprehensive evaluation of the individuals who have suffered a fall in the past year to predict participation restrictions. The performance assessed, in few minutes, by these tests, will gather information about balance and mobility impairments, that associated with a quick assess of Self-efficacy for exercise [7] will outline the quality of life of persons with history of falls.

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Authors would like to thank all participants and centres, clinics and other entities hosting the screenings. Financial support from project FallSensing: Technological solution for fall risk screening and falls prevention (POCI-01-0247-FEDER-03464), co-funded by Portugal 2020, framed under the COMPETE 2020 (Operational Programme Competitiveness and Internationalization) and European Regional Development Fund (ERDF) from European Union (EU).

References

Keywords
Participation, Community-dwelling adults, Falls, Functional capacity, Self-efficacy for exercise.

O38

Background
Ageing population is a worldwide phenomenon. The number of older frail people increases rapidly, which leads to a substantial impact on the economic, social and health systems. Cardiovascular Health Study data [1] estimated that, in a population with 65 years or more, 6.3% of aged adults have the frailty phenotype. According to Fried et al., frailty is a vulnerable condition characterized by the decline of biological reserves [2,3]. This happens due to deregulation of multiple physiological systems, which puts the individuals at risk by reducing the organism resistance to stressful factors, with a subsequent loss of functional homeostasis. One of the most significant aspects described in the literature is the fact that frailty is an important risk factor for falls. It is estimated that one in every three adults over 65 years fall each year. The frailty syndrome also compromises the social participation of aged adults.

Objective
To understand if adults with 65 years or over with frailty phenotype have history of falls in the period of the previous 12 months prior to the study and worst social participation, when compared to the ones who don’t have this phenotype.

Methods
A sample of 122 community-dwelling adults (age ≥65 years), mean age 72.22 ± 6.44 years old (63.9% female), with history of at least one fall in the previous year participated in this cross-sectional study. Data were collected by a demographic, clinical and history of falls questionnaire, functional tests and the Activities and Participation Profile related to Mobility (PAPM).

Results
We verified that there are statistically significant differences in the history of falls between no-frailty (n = 24; mean number of falls = 1.92) and frailty/pre-frailty (n = 31; mean number of falls = 3.06) individuals (p = 0.036), as well as in the social participation score of both groups, with worse profile among the frailty/pre-frailty (0.821), when compared to no-frailty (0.276) (p = 0.000).

Conclusions
Adults with 65 years or over who present frailty or pre-frailty phenotype, when compared to no-frailty ones, have higher rate of falls in the previous 12 months and more restrictions in social participation. Physiotherapists benefit from this knowledge to understand needs of this population and to plan interventions focus on prevention of falls and strategies to promote participation as promising outcomes.

References
Results
Braun and Clarke (2006) [1].

An explorative study of qualitative approach, with 13 sex workers interviewed analysed using the thematic analysis method proposed by Braun and Clarke (2006) [1].

Methods
An explorative study of qualitative approach, with 13 sex workers interviews analysed using the thematic analysis method proposed by Braun and Clarke (2006) [1].

Results
When asked about changes occurred after 3 months of follow-up in the program some men reported having not noticed any changes, which indicates that the program is not effective to all participants and the importance of longer follow-ups. However, most men cited changes in the way they act and perceive the division of tasks between men and women, thus participation in the program can be the starting point for changing the relationship established and the many obstacles they overcome in order to express their sexuality through commercial sex.

Conclusions
The main conclusions provide evidence of the use of commercial sex by people with disabilities who seek in this service sexual and emotional satisfaction. Certain relationship specificities tend to be experienced with feelings of embarrassment on the part of professionals. Based on the experiences and obstacles sex workers observed when working with people with disabilities, measures were pointed out to improve the psychological and sexual health of those involved in the situation, which highlights the need for training to serve this group of clients, as well as the need for legalization of sex work.

References
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O39
Sexual assistance through the eyes of sex workers: one path to improve sexual lives of people with disabilities
Ana R Pinho1, Fernando A Pocahy2, Conceição Nogueira1
1Center for Psychology, Faculty of Psychology and Education Sciences, University of Porto, 4200-135 Porto, Portugal; 2Universidade do Estado do Rio de Janeiro, 20550900 Rio de Janeiro, Brazil
Correspondence: Ana R Pinho (mips20699@fpceu.up.pt)
BMCL Health Services Research 2018, 18(Suppl 2):O39

Background
Historically, people with disabilities have been seen as asexual and their sexual rights were often neglected. Nowadays, some progresses have been made but they still face multiple stereotypes and barriers that limit their social and sexual lives. Sexual assistance is a way of sexual expression in which trained individuals provide sexual services to clients with disabilities, improving their well-being in relation to sexuality. However, in Portugal the only way to access commercial sex is through sex workers who have no training to attend disabled clients.

Objective
To understand if sex workers see training as a useful aspect to be taken into account for improving psychological and sexual health of clients with disabilities and themselves.

Methods
An explorative study of qualitative approach, with 13 sex workers interviews analysed using the thematic analysis method proposed by Braun and Clarke (2006) [1].

Results
To understand if sex workers see training as a useful aspect to be taken into account for improving psychological and sexual health of clients with disabilities and themselves.

Conclusions
From the analysis of the interviews four themes have emerged. Sex workers theme focus on the life experiences and motivations to attend clients with disabilities. Clients theme characterizes who are the people with disabilities seeking commercial sex. Search for sex work theme deepens knowledge about how they get in touch with sex workers. Finally, the attendance theme explains the dynamics of the relationship established and the many obstacles they overcome in order to express their sexuality through commercial sex.

References

Keywords
Community dwelling adults, Frailty phenotype, Risk of falls, Social participation.

O40
Results of an intervention program for men who batter women: perceptions of accompanied men
Anne CLG Silva, Elza B Coelho
Department of Public Health, Federal University of Santa Catarina, 88040-900 Florianópolis, Santa Catarina, Brazil
Correspondence: Anne CLG Silva (anne_c1g@hotmail.com)
BMCL Health Services Research 2018, 18(Suppl 2):O40

Background
In intimate partner violence, man is the main perpetrator of violence, and it is essential to include him in interventions to decrease violence, because he can take responsibility for violence, seeking new forms of expression. However, intervention with men is criticized, such as: using resources that could be targeted to victims; the imposition of re-education measures rather than punitive measures; consider that men do not change their behaviour [1]. Nevertheless, it is within the framework of evaluation that we find one of the major shortcomings of batterer intervention programs, since the effects of participation of men in that, have been receiving little analysis [2].

Objective
This research aims to analyse the results of a batterer intervention program from the perspective of man accompanied by the program.

Methods
It is a case study conducted in a batterer intervention program with 86 men. It was used the Centres for Disease Control and Prevention Follow Up Questionnaire, adapted to be used in Brazil. Data were analysed according to content analysis techniques. This project was approved by the Human Research Ethics Committee of the Infantile Hospital Joana de Gusmão. Subjects were asked to agree through an informed consent.

Results
When asked about changes occurred after 3 months of follow-up in the program some men reported having not noticed any changes, which indicates that the program is not effective to all participants and the importance of longer follow-ups. However, most men cited changes in the way they act and perceive the division of tasks between men and women, thus participation in the program can be the starting point for rethinking and building new ways of expressing masculinity. And the changes cited go beyond the scope of the marital relationship, encompassing the relationship with the children, the abandonment of addictions and the desire to seek school education.

Conclusions
According to the data, attention to perpetrators of violence has a positive influence not only in the behaviour towards the partner, but also on the relationship with children and the abandonment of addictions. Although longer follow-ups - including the couple - are needed, the batterer intervention program may be a tool to decrease violence against women.

References

Keywords
Sexual health, Sexual Assistance, Sex Work, Clients with Disabilities.
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Keywords
Violence against women, Batterer intervention, Men, Program evaluation.

O41
Effectiveness of a reminiscence program on cognitive frailty, quality of life and depressive symptomatology in the elderly attending day-care centres
Isabel Gil1, Paulo Costa2, Elzbieta Bobrowicz-Campos2, Rosa Silva1, Maria L Almeida1, João Apóstolo3
1Nursing School of Coimbra, 3046-851 Coimbra, Portugal; 2Health Sciences Research Unit: Nursing, Nursing School of Coimbra, 3046-851 Coimbra, Portugal; 3Universidade Católica Portuguesa, Institute of Health Sciences, 4200-374 Porto, Portugal

Background
Reminiscence is a therapeutic intervention based on the account of personal experiences that allows access to significant life events. Evidence suggests that this intervention is particularly beneficial for the elderly with neurocognitive disorders [1], especially with regard to psychosocial variables. In Portugal, this intervention is underused, and there is a need to study its applicability and efficacy.

Objective
To evaluate the effect of a reminiscence-based program (RBP) [2] on cognitive frailty, quality of life and depressive symptomatology in elderly people attending day-care centres. Evaluate professional’s satisfaction with the program and identify obstacles in its implementation.

Methods
A quasi-experimental study with one group was carried out in four day-care centres in the central region of Portugal. The framing sample included 69 older adults aged ≥65 years. Of those, 28 (average age of 79.33 ± 7.35 years and average education of 3.29 ± 1.86 years) participated in the 7-week RBP, twice a week. Outcomes of interest were cognitive frailty indicators measured through the Montreal Cognitive Assessment (MoCA); quality of life measured using the short version of World Health Organization Quality of Life Scale-module for older adults (WHOQOL-OLD-8); and depressive symptomatology measured by the 10-item Geriatric Depression Scale (GDS-10). In addition, the eight professionals conducting the study were asked to identify obstacles to the successful implementation of the program, and to evaluate its structure, themes, contents, and the involvement of the elderly in each session.

Results
RBP was shown to have positive effects on the MoCA and WHOQOL-OLD-8 score (p < 0.05). Improvement in the GDS-10 score was observed; however, it was statistically non-significant. The structure of the program sessions was considered as mostly clear and perceptible (94%), and themes and contents as mostly pleasant and appropriate (94%). Positive feedback was obtained regarding the program capacity to involve the elderly in the activities proposed (87.5%). However, according to the professionals’ opinion, there is a need for amplier capacitación of the teams implementing RBP, better articulation with the institutions regarding the used space and activities schedule, and better articulation with the elderly to guarantee their commitment to the program.

Conclusions
Reminiscence was shown to be effective in improving cognition and quality of life, as well as potentially effective in decreasing depressive symptomatology. Therefore, it presents a therapeutic potential, contributing to the improvement of the care provided. It is also worth mentioning the good acceptance of the program which, however, implies the qualification of the professional teams for its implementation.

Acknowledgements
This study was developed within the context of the project “664367/FOCUS” (funded under the European Union’s Health Programme (2014-2020)) and project ECOG (funded by the Nursing School of Coimbra).

References

Keywords
Reminiscence, Elderly, Cognition, Quality of life, Depressive symptomatology.

O42
Development and validation of a reminiscence group therapy program for older adults with cognitive decline in institutional settings
Isabel Gil1, Paulo Costa2, Elzbieta Bobrowicz-Campos2, Rosa Silva3, Daniela Cardoso3, Maria Almeida1, João Apóstolo4
1Nursing School of Coimbra, 3046-851 Coimbra, Portugal; 2Health Sciences Research Unit: Nursing, Nursing School of Coimbra, 3046-851 Coimbra, Portugal; 3Universidade Católica Portuguesa, Institute of Health Sciences, 4200-374 Porto, Portugal; 4Health Sciences Research Unit: Nursing, Portugal Center for Evidence-Based Practice: A JBI Centre of Excellence, 3046-851 Coimbra, Portugal

Background
Research has evidenced the positive impact of non-pharmacological therapies aimed at elderly people with cognitive decline in the institutional setting. Reminiscence Therapy (RT) emerges in this category as an enabling strategy, which favours moments of happiness, dignity and life purpose [1]. Nonetheless, studies centred in RT are limited in Portugal, with a clear absence of structured interventional programs, emerging the need to develop and validate well-defined and replicable RT programs [2].

Objective
We intend to construct and validate a RT program directed to elderly people with cognitive decline, to be implemented in institutional settings by healthcare professionals.

Methods
Guidelines for complex interventions development from the Medical Research Council were followed [3]. The program was conceptualized in four distinct phases: Phase I (Preliminary), the initial conceptualization of the program design and supportive materials; Phase II (Modelling), consisting in the conduction of interviews and focus groups with healthcare specialists; Phase III (Field Test), aiming at the evaluation of each program session; and Phase IV (Consensus Conference), to synthesize the contributions and analyse challenges that emerged in preceding phases.

Results
Based on the contributions of experts, healthcare professionals and the institutionalized elderly, a RT program divided into two strands was formed. The main strand includes 14 sessions, performed twice a week. The maintenance strand included seven weekly sessions. Each thematic session is related to the participants’ life course, with a maximum duration of 60 minutes. The 4-phase conceptualization process resulted in the creation of a digital platform with audio-visual contents to aid professionals during each session; inclusion of an introductory section that contextualizes the therapeutic potential of RT; introduction of complementary activities that can be developed additionally in the institutional settings; reinforcement of multisensory stimulation throughout
Background
Several efficacious treatments for anxiety are available, which among different forms of psychotherapy and pharmacotherapy [1]. However, literature favour more findings stemming from studies about the efficacy of psychotherapies/therapies provided by nurses [2,3] than those arising from studies about the efficacy of nursing psychotherapeutic interventions (interventions classified, for instance, on Nursing Interventions Classification) [4]. Moreover, no studies were found in literature about the efficacy of psychotherapeutic interventions on anxiety as a symptom.

Objective
Evaluating the short-term efficacy of a psychotherapeutic intervention in nursing on Portuguese adult psychiatric outpatients with the nursing diagnosis “anxiety”.

Methods
A single-blind randomised controlled trial was conducted at a Psychiatry Ward Outpatient Service of a Hospital in the north of Portugal. Participants were psychiatric outpatients, aged 18-64, with nursing diagnosis “anxiety”, who were randomly allocated to an intervention group (n = 29) or a treatment-as-usual control group (n = 31). The interventions consisted in psychotherapeutic interventions for the nursing diagnosis “anxiety”, integrated in the Nursing Interventions Classification. One mental health nurse provided the individual-based intervention over a 5-week period (one 45-60 minutes weekly session); A treatment-as-usual control group received only pharmacotherapy (if applicable). The primary outcomes, anxiety level and anxiety self-control, were assessed with the outcomes “Anxiety level” and “Anxiety self-control”, integrated in the Nursing Outcomes Classification (Portuguese version) [5] respectively. Time frames for assessment were at baseline and post-test (6 weeks after).

Results
Patients from both groups presented improvements in anxiety levels, between the pre-test and the post-test assessment; however, analysis of means showed that patients of the intervention group presented significantly better results than those of the control group. Furthermore, only patients in the intervention group presented significant improvements in anxiety self-control. The psychotherapeutic intervention presented a very large effect size on the anxiety level and a huge effect size on the anxiety self-control. 22.8% and 40% of the outcomes related to the anxiety level and anxiety self-control, respectively, are predicted in the event of integrating the intervention group.

Conclusions
This study demonstrated the psychotherapeutic intervention model in nursing was efficacious in the decrease of anxiety level and improvement of anxiety self-control in a group of Portuguese adult psychiatric outpatients with pathological anxiety, immediately after the intervention. The results of the multiple linear regression and the very large effect size identified suggest that a significant part of the improvements could be directly attributed to the intervention.

Trial Registration Number
NCT02930473

References

Keywords
Anxiety, Clinical nursing research, Nursing, Psychiatric nursing, Psychotherapy, Brief.

O44
“Art therapy” in acute psychiatry: a Portuguese case study
Clara Campos¹, Aída Bessa¹, Gorieta Neves¹, Isabel Marques², Carlos Laranjeira¹

¹Centro Hospitalar e Universitário de Coimbra, 3000-075 Coimbra, Portugal; ²Escola Superior de Enfermagem de Coimbra, 3046-851 Coimbra, Portugal; ³Hospital Distrital da Figueira da Foz, 3094-001 Figueira da Foz, Portugal

Correspondence: Clara Campos (ccalmeidacampos@gmail.com)

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Background
In the last few years, some researchers have focused on the valorisation of interventions that stimulate the use of art therapy in individuals with mental illness. This assessment is based on the assumption that biological programs (including psycho pharmaceuticals) should be increasingly inclusive, and therefore should include psychosocial...
approaches based on the recovery model. However, there is as yet no effective consensus on techniques and interventions that reveal greater effectiveness as well as systematization.

Objectives

a) Evaluate the effectiveness of a program of 3 sessions of “art therapy” in individuals with mental illness, in the change of emotional indicators, namely depression, anxiety, stress, and psychological well-being; b) analyse the meanings attributed by the person to his creative self-expression.

Methods

We chose a pre-experimental study, of mixed approach (quantitative and qualitative), with pre- and post-test design and without control group. Twelve male subjects mostly diagnosed with Schizophrenia and Mood Disorders, who were admitted to an acute psychiatry unit, participated in the study. The instruments used to collect information were: Depression, Anxiety and Stress Scale [DASS-21]; Subjective Well-Being Scale [EBEP-18 items] and a semi-structured interview.

Results

The main results suggest, after the evaluation between the pre- and post-test that there was an improvement in the dimensions anxiety, stress, self-acceptance, life goals and overall psychological well-being. The categories that resulted from the thematic analysis of the interviews (hope for the future, learning to manage difficulties and dealing with difficult emotions) revealed the usefulness of the program in the participant’s recovery process.

Conclusions

The inclusion of this type of psychosocial intervention in specialized clinical practice in Mental Health Nursing allows minimizing the impact of the disease in an organizational culture that should increasingly be oriented towards recovery.

Trial registration

NCT03575442

Keywords

Recovery, Art therapy, Mental Health Nursing.

O45

Nursing care at the postpartum home visit: the couple perspective

Bárbara Pinto1, Marília Rua2, Elsa Melo3

1Unidade de Cuidados de Saúde Primários Estarreja I, Agrupamento de Centros de Saúde Baixo Vouga, 3860-335 Beduído, Portugal; 2Escola Superior de Saúde, Universidade de Aveiro, 3810-193 Aveiro, Portugal

Correspondence: Bárbara Pinto (barbarapinto_41@hotmail.com)

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Background

The birth of a child corresponds to a new stage in the family life cycle and implies a process of restructuring, adaptation to physical, psychological, family and social readjustments [1]. This transition predicts a change of roles of all the members of the family and the construction of a new personal, conjugal and familiar identity [2]. From institutions and health professionals, interventions are expected to successfully overcome these challenges. At this stage, the home visit imposes itself as an important intervention in Nursing care. Its accomplishment, by the family nurse, promotes individual and family empowerment and autonomy in healthy parenting.

Objectives

Understanding the couple’s perception about nursing practices in the context of home visit postpartum, as a contribution to the transition to parenting.

Methods

The research was based on the phenomenological domain, in a qualitative approach and includes eleven couples experiencing parenthood for the first time, between October 2016 and January 2017, enrolled in the Family Health Unit of Barrinha. Data collection included semi-structured interviews were conducted in order to guarantee the narratives of the experiences and their deeper understanding. The information was analysed according to the technique of content analysis, using WEBQDA software.

Results

This study revealed that the birth of the first child is an event of individual and family development and growth, which implies adaptation to a set of changes and redefinition of roles, built on a day-to-day basis, and in close cooperation between the family and the nursing team. The approach in the home nursing visit was directed to the well-being of the new born and its mother, appearing to the family as a resource, not having the concern to explore the interaction and the reciprocity within the family. We highlight three dimensions: Postpartum home visit, that describes the experiences of the participants about the care operationalized in this visit; Family Nursing, which traces the way they understand the work of the family nurse in this transition and, lastly, the Postpartum parenting, which reports the mother perception about this stage of the life cycle.

Conclusions

The home visit and work philosophy by the family nurse contributed to the positive adaptation to parenthood and to approach the family as a resource, not having the concern to explore the interaction and the reciprocity within the family. We highlight three dimensions: Postpartum home visit, that describes the experiences of the participants about the care operationalized in this visit; Family Nursing, which traces the way they understand the work of the family nurse in this transition and, lastly, the Postpartum parenting, which reports the mother perception about this stage of the life cycle.

References


Keywords

Family Nurse, Family, Puerperium, Home visit.

O46

Skills of occupational therapy students required for an effective relationship

María Y González-Alonso1, Valentina G Blanco2, Reninka De Koker3, Luc Vercruysee3

1Department of Health Sciences, University of Burgos, 09001 Burgos, Spain; 2Department of Occupational Therapy, University Odisee, 1000 Brussel, Belgium

Correspondence: María Y González-Alonso (mygonzalez@ubu.es)

BMC Health Services Research 2018, 18(Suppl 2):O46

Background

The acquisition of skills throughout the career facilitates the professional practice and satisfaction of the occupational therapist. In order to give direct attention to a situation of disability or risk, the professional must apply the best evidence-based strategy; and to establish a productive relationship with the client, the professional needs to learn to use interpersonal skills.

Objective

The objective of the study was to analyse how the perception of occupational therapy students changes their personal traits and challenges throughout their careers.

Methods

This is a descriptive, cross-sectional study of an intentional sample consisting of 183 students of occupational therapy. The study is part of the 2016-2017 academic course. An ad hoc questionnaire was prepared based on the collection of personal data and the perception of 29 skills that [1] proposed: The students should value the traits and add value for improvement of the quality of health care, yet it was not assumed as a reality in the context of caring.
positively than those in their final year in respect to the different variables. Significant differences related to the course were only observed in two traits: empathetic and collaborative.

Conclusions
Occupational therapy students, those in both their first and final years, consider that they have a large number of relational skills which enable them to give an appropriate response to the events that occur in therapy. Empathy is the only trait which indicates differences depending on the independent variables studied, for improvement of the quality of health care, yet it was not assumed as a reality in the context of caring.

References

Keywords
Occupational Therapy, Traits, Challenges, Interpersonal Relationships, Attitudes.

O47
Use of performance-enhancing substances in Portuguese gym/fitness users: an exploratory study
Ana S Tavares, Elisabete Caroline
Escola Superior de Tecnologia da Saúde de Lisboa, Instituto Politécnico de Lisboa, 1990-096 Lisboa, Portugal
Correspondence: Ana S Tavares (anatavares@estesi.ip.pt)
BMC Health Services Research 2018, 18(Suppl 2):O47

Background
The use of performance-enhancing substances (PES) by competitive or recreational sports practitioners is a pertinent and current topic, particularly in the field of public health. People who use gymms come from diverse socio-demographic conditions, where the consumption of this type of substances is not only used for the purpose of improving physical performance, but also to obtain a more muscular physique, especially for men, and leaner, especially for women whose goal is faster weight loss [1]. In Portugal there are practically no studies on the use of PES outside competitive sport, highlighting a study developed in 2012 by the European Health & Fitness Association [2].

Objective
Investigate the prevalence and profile of PES users amongst a sample of Portuguese gym/fitness users.

Methods
Cross-sectional, quantitative and exploratory study, amongst a convenience sample of 453 Portuguese gym/fitness users, recruited, directly on social networks (Facebook) and by institutional email (via gymms). Data were collected via a structured on-line questionnaire. Statistical analysis was performed using SPSS 22.

Results
Among the 453 gym/fitness users (61.3% female; 38.7% male) who participated in the survey, 50 (11.1%) reported PES use (5.4% female; 19.5% male). The mean age of PES users was 34.96 years (Std. Dev. = 10.00). They were married, unemployed and with a low level of education (until 9 years = 41.7%). PES users showed more years of training (4 years) than no PES users. The main sports modalities of the respondents were cardio fitness (57.0%), bodybuilding (56.5%), stretching (27.8%) and localized (27.2%). PES use was suggested mostly by friends (51.9%), peers (30.8%) and by internet (30.8%). The most commonly consumed PES were diuretics (46.0%) and anabolic steroids (44.0%). Thirty percent of PES users reported side effects and the most commonly reported was acne (53.3%), agitation and tremors (40.0%). The main reason for using PES is the improvement of the physical condition (54.0%). Five-point three percent of non-PES users expressed an interest in using PES in the future.

Conclusions
This exploratory survey revealed the use of PES amongst Portuguese gym/fitness users and its increasing importance to investigate the psychosocial factors that may influence PES use in this specific population. Exploring these factors may improve the effectiveness of practical interventions and motivational strategies to reduce PES use among gym/fitness users.

References

Keywords
Performance enhancing substances, O47 prevalence, Gym/fitness users.

O48
Identification of frailty condition of elderly people in the community
Inês Machado1, Pedro Sá-Couto2, João Tavares1,4
1Department of Medical Sciences, University of Aveiro, 3810-193 Aveiro, Portugal; 2Center for Research and Development in Mathematics and Applications, Department of Mathematics, University of Aveiro, 3810-193 Aveiro, Portugal; 3Nursing School of Coimbra, 3046-851 Coimbra, Portugal; 4Coimbra Education School, Polytechnic Institute of Coimbra, 3030-329 Coimbra, Portugal
Correspondence: Inês Machado (inessantagio@live.ua.pt)
BMC Health Services Research 2018, 18(Suppl 2):O48

Background
Frailty is a geriatric syndrome with multiple causes and contributors that is characterized by diminished strength, endurance, and reduced physiologic function that increases an individual’s vulnerability for developing increased dependency and/or death [1]. Current research is still under discussion regarding the nature, definition, characteristics and prevalence of frailty. Identify frail older adults (OA) has recently been recognized as an important priority, especially in community-dwelling OA.

Objective
Determine the prevalence of frail OA in a primary care (PC) settings and to assess the concurrent validation of the Portuguese version of Prisma7 (P7) with two other published and validated instruments: Frailty Phenotype (FF) and the Groningen Frailty Indicator (IFG).

Methods
This study was conducted in one PC unit in the north region of Portugal with a convenience sample of 136 OA (≥ 65 years). The questionnaire included: 1) sociodemographic, family and health variables; and 2) the frailty instruments P7, FF and IFG. OA were considered frail: ≥ 3 positive questions out of 7 for P7; ≥3 factors out of 5 for FF; and ≥ 4 dimensions out of 8 for IFG. Further details about these scales can be found in Machado. For the concurrent validity, methods based on correlation (Spearman Rank test) and agreement (Cohen’s Kappa, sensitivity and specificity values) were used. For comparison of the two groups (frailty or non-frailty), an independent t-test was calculated. Finally, binary logistic regression model was considered to identify predictors of frailty.

Results
According to the characterization of P7, IFG and FF, the prevalence of frail OA was 7.4%, 19.9% and 26.5%, respectively. The agreement percentage between the instruments was moderate ranging from 68% to 77%, observing that the P7 is partially concordant with the other instruments. The P7 showed high specificity values, but low sensitivity values. Frail OA were characterized (p < 0.05) as being older, having worse health perception, lower physical capacity, slower walking velocity, higher IFG scores, and decreased hand grip strength. As predictors of frailty, in the multivariate model, older age (OR = 1.111) and better physical capacity (OR = 0.675) were significant (p < 0.01).

Conclusions
A sample of more robust people and a “synthetic” application of P7 (without explaining the questions) may have influenced the prevalence results presented. More studies are needed in order to further
evaluate the psychometric properties of the various tools tested. The P7 should be used with caution in identifying frailty in PC, therefore we suggest the incorporation of another measure of frailty assessment.

Acknowledgements
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References

Keywords
Frailty, Elderly, Instrument, Prisma7.

O49
Use of software in learning difficulties of reading: comparative analysis between digital environment and hybrid environment
Ana Sucena1, Ana F. Silva

Correspondence: Ana Sucena (sucena.ana@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O49

Background
The learning difficulties of the letter-sound relations are seen as a risk factor for future difficulties in learning to read [1]. Ideally, the identification of children at risk of failure to learn reading and writing should occur in the last year of preschool or early in the first year, so that intentional programs can be implemented to promote basic reading skills [2,3,4]. The most promising reading learning support programs combine explicit phonological awareness training with highly structured reading instruction [5,6].

Objective
This study evaluated the impact of two early intervention programs on reading learning difficulties. A program exclusively in virtual environment and a hybrid program, comprising sessions in virtual environment and in real environment.

Methods
Participants were 57 children, attending the first year of schooling, native speakers of European Portuguese, identified as at risk of having reading difficulties. The children were divided into three groups: (a) virtual environment intervention - training with Graphogame software, (b) hybrid intervention - training using Graphogame software and real-time sessions of pre-reading and reading skills orientated by a technician from the CiiL team (Center for Research and Intervention in Reading) and (c) absence of intervention beyond that provided for in the regular system of education. The intervention programs were developed in a school context, with the virtual component (Graphogame) developed with daily periodicity, with duration between 10 to 15 minutes. The intervention in real environment was carried out once a week, with activities of 30 to 40 minutes, using materials of a playful character, created specifically for the present study. In both types of sessions, the groups consisted of two to five children. The participants were evaluated at the level of letter-sound relations, phonemic awareness, word reading and pseudo word reading.

Results
Both intervention environments produced significantly more positive effects than those obtained by the control group. Still, the software Portuguese Basis Graphogame is an effective tool, however, with a more positive effect when used in parallel with a face-to-face reading promotion session.

Conclusions
The early intervention in reading difficulties should promote the explicit training of phonemic awareness and letter-sound relations in order for the decoding process to be developed. Although the virtual environment – in this case the software Portuguese Basis Graphogame – is a highly effective tool, ideally, it should be combined with a real-environment intervention to ensure that the child effectively dominates letter-sound relationships and that trains intensively the decoding process.

References

Keywords
Graphogame, Reading acquisition, Reading intervention.

O50
Consumption patterns of non-steroidal anti-inflammatory drugs and attitudes towards the medicine residues in north and central regions of Portugal
Andréia Carreira1, Catarina Valente1, Joana Tomé1, Tânia Henriques1, Fátima Roque1,2, Márcio Rodrigues1,2, Maximiano P Ribeiro1,2, Paula Coutinho1,2, Sandra Ventura1,2, Sara Flores1,2, Cecília Fonseca1,2, André RTS Araújo1,2,3
1School of Health Sciences, Polytechnic Institute of Guarda, 6300-749 Guarda, Portugal; 2Research Unit for Inland Development, Polytechnic Institute of Guarda, 6300-559 Guarda, Portugal; 3LAQV/REQUIMTE, Department of Chemical Sciences, Faculty of Pharmacy, University of Porto, 4050-313 Porto, Portugal

Correspondence: André RTS Araújo (andreartsaraujo@ipg.pt)
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Background
Non-steroidal anti-inflammatory drugs (NSAIDs) are one of the most commonly used medications in the world because of their analgesic, antipyretic and anti-inflammatory properties [1–3]. However, their use is associated with the occurrence of serious adverse drug events, particularly gastrointestinal, cardiovascular and renal complications [3].

Objective
To assess the NSAIDs consumption pattern by the adult residents in the north and central regions of Portugal, as well as, to evaluate their individual’s behaviour concerning the resulting residues after the use of the packages of medicines.

Methods
A questionnaire survey was administered to a sample of 400 pharmacy customers in the districts of Aveiro, Leiria, Porto and Viseu between December 2015 and February 2016, with questions regarding the knowledge of NSAIDs consumption and their attitudes towards the medicine residues.
Results
In our study, the prevalence rate of NSAIDs use in the last 6 months was 74.3 % (95 % CI 70.0–78.6), showing a high level of consumption of this pharmacotherapeutic group. The most commonly used NSAID was ibuprofen (76.4 %), followed by diclofenac (36.0 %) and nimesulide (8.4 %). The most reported therapeutic indications were headaches (36.4 %), followed by back pain (33.3 %), fever (24.6%) and flu (20.5%). Surprisingly, adverse drug events were reported by only 6.7 % of respondents. Even so, the most common adverse drug event was diarrhoea (4.0%). These results could be explained considering that NSAIDs use is episodic and limited to shorter periods and probably the respondents did not correlate the adverse effects of these medicines. Relatively to the destination of the packages of medicines that respondents no longer used, it was verified that 58% of the respondents claimed to deliver them in a pharmacy, 17.3% throw away in the common waste, 24.0% keep them at home, 0.5% put in sanitary sewers and 0.2% donate to charities.

Conclusions
According to these findings, it was evident the trivialization of NSAIDs consumption, being imperative to monitor their use and educate the users for its rational use. On another hand, it is important to maintain the incentive and to educate the population to adopt adequate attitudes regarding medicine residues recycling.

References

Keywords
Nonsteroidal anti-inflammatory drugs; Consumption patterns; Attitudes; Medicine residues.

OS1
Allergic rhinitis characterization in community pharmacy customers of Guarda city
Hélio Guedes¹, Agostinho Cruz², Cecília Fonseca²,¹, André RTS Araújo¹,²,³,⁴
¹School of Health Sciences, Polytechnic Institute of Guarda, 6300-749 Guarda, Portugal; ²School of Health Sciences, Polytechnic Institute of Porto, 4200-072, Porto, Portugal; ³Research Unit for Inland Development, Polytechnic Institute of Guarda, 6300-559 Guarda, Portugal; ⁴LAQV/REQUIMTE, Department of Chemical Sciences, Faculty of Pharmacy, University of Porto, 4050-313 Porto, Portugal
Correspondence: André RTS Araújo (andreartsaujo@ipg.pt)
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Background
Allergic rhinitis (AR) is a hypersensitivity reaction caused when inhaled particles contact the nasal mucosa and induce an immunoglobulin E -mediated inflammatory response resulting in sneezing, nasal itching, rhinorrhea, nasal obstruction, or a combination of those symptoms [1]. The prevalence of AR is sometimes cited as 10% to 30% in adults [1]. It is increasingly recognized that the symptoms of AR often adversely impact the quality of life of the affected individuals and impose a significant health and socio-economic burden on the individual and society [2].

Objective
The aims of the present research were to estimate the prevalence of AR, determine the predominance of the symptoms, determine their impact on quality of life (QoL), as well as characterize the control strategies and treatment of AR in pharmacy customers of Guarda city.

Methods
An observational, cross-sectional and analytical study was conducted, and a questionnaire survey was developed and used as the data collection instrument. This included the Control of Allergic Rhinitis and Asthma (CARAT) test and the scale Quality of Life of the World Health Organization (WHOQOL-Bref). Data collection took place in community pharmacies in the city of Guarda between May and December of 2014.

Results
In the sample of 804 respondents, there was a predominance of females (66.3%) and the average age was 48.3 ± 16.5 years. The prevalence rate of AR was 13.1% (95 % CI 10.8–15.4%). About 40% of the respondents with AR had no medical diagnosis. It was verified that there weren’t differences by gender in terms of quality of life (p = 0.929) or in the control of the AR symptoms (p = 0.168). On another hand, a high level of education (higher education) seemed to be a factor that contributed to a better quality of life (p = 0.001) and to a better control of symptoms (p = 0.019). It was also observed that a better control of the symptoms of AR was associated with a better quality of life (Pearson’s r = 0.292, p = 0.003).

Conclusions
The prevalence rate was estimated between 10.8% and 15.4%, which resulted from the medical diagnosis and the symptomatic diagnosis made through the data collection instrument. The results indicated that although the respondents do not have properly controlled the AR and suffer from associated comorbidities, they have a reasonable quality of life indexes.

References

Keywords
Allergic rhinitis; Community pharmacy customers; Quality of life.

OS2
Weight transfer during walking and functional recovery post-stroke in the first 6 months of recovery – an exploratory study
Marlene Rosa¹,² (marlene.rosa@ipleiria.pt)
¹School of Health Science, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; ²Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
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Background
One of the most controversial abnormal patterns during walking in patients with stroke occurs during weight transfer (WT) of the paretic lower limb, however no perception of the knee patterns developed during stroke recovery exists.

Objective
To explore the importance of the knee kinematic pattern in the weight transfer (WT) walking period for functional recovery in the first 6 months post-stroke.

Methods
Inpatients with a first ischemic stroke (< 3 months), able to walk, were evaluated (T0) and reevaluated 6 months post-stroke (T1). Patients were video-recorded in the sagittal plane while walking at their self-speed and the video was used to classify the knee pattern during WT. Walking speed, self-perceived balance, knee muscle strength and sensory-motor function of the hemiparetic lower limb were also assessed. Participants were stratified according to the knee pattern recovery. Comparisons between and within groups were conducted.

Results
Thirty-two patients (70.28 ± 10.19 years; 25.54 ± 3.26 Kg/m²) were included. Different groups were identified, according to the knee...
pattern: (1) normal at T0 and T1 (N = 10); (2) normal pattern only at T1 (N = 7); (3) acquisition/change in the knee pattern deviation (N = 7); (4) maintenance of the knee pattern deviation (N = 8). Modifications in the normal knee pattern might be developed to reach acceptable levels of functioning performance (p > 0.05, Groups 1/3).

Conclusions
The knee pattern correction in WT might help establishing stroke treatment priorities. A further understanding of the causes for deviations in the knee pattern in WT will help establishing stroke treatment priorities.

Trial Registration
NCT02746835

Keywords
Weight transfer, Gait, Stroke, Knee patterns.

O53 Reference values of cardiorespiratory fitness field tests for the healthy elderly Portuguese
Patricia Rebelo1,2, Ana Oliveira1,2,3, Alda Marques1,2
1Respiratory Research and Rehabilitation Laboratory, School of Health Sciences, University of Aveiro, 3810-193 Aveiro, Portugal; 2Institute for Research in Biomedicine, University of Aveiro, 3810-193 Aveiro, Portugal; 3Faculty of Sports, University of Porto, 4200-450 Porto, Portugal

Correspondence: Patricia Rebelo (patriciarebelo@ua.pt)

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Background
Cardiorespiratory fitness (CRF) is recognized as an independent predictor of all age morbidity and mortality and is closely related with people’s functional capacity [1]. Recently, CRF has been described as a clinical vital sign, which highlights its role in health promotion and disease prevention [2]. The 6-min-walk test (6MWT), incremental shuttle walk test (ISWT), unsupported upper limb exercise test (UULEX) and the 1-min sit-to-stand test (1STS) are worldwide tests to assess CRF. Reference values of these tests are however, lacking for the Portuguese elderly population. This hinders the interpretability and limits the confidence of clinical decision-making in the field of CRF.

Objective
To contribute for establishing reference values for the 6MWT, ISWT, UULEX and 1STS in the Portuguese healthy elderly population.

Methods
A cross-sectional study was conducted with healthy elderly volunteers [3] recruited from the Centre region of Portugal. Each participant conducted two repititions of the 6MWT, ISWT, UULEX and 1-min STS. The best repetition was considered for analysis. Descriptive statistics were used to determine reference values by age decade (61-70: 71-80; 81-90) and gender. Two-way ANOVA was used to investigate significant effects for age/gender and their interaction. Values were presented as mean ± standard deviation or median [95%, Confidence Intervals].

Results
262 healthy people were enrolled (61.5% female; 75.0±0.5yrs), 125 completed the 6MWT (66.4% female; 75.1±0.7yrs), 83 the ISWT (57.2% female; 76.1±1.0yrs), 210 the UULEX (63.3% female; 75.7±0.6yrs) and 50 the 1STS (54% female; 72.1±1.0yrs). Values decreased significantly along the decades and were statistically different between male and female (p < 0.05) across all tests. The following values were found for the 6MWT (61-70y: males - 519.7[484.7-554.7]m vs. females - 488.3[458.8-517.7]m; 71-80y: 461.0[438.9-532.5]m vs. 377.1[316.4-437.8]m; 81-90y: 294.0[226.5-361.6]m); II) ISWT (61-70y: males - 40.0[33.2-46.8]min; females - 488.3[458.8-517.7]m; 71-80y: 353.3[212.5-494.2]m; 81-90y: 254.1[211.6-296.6]m); II) UULEX (61-70y: males - 377.1[316.4-437.8]m; 71-80y: 377.1[316.4-437.8]m; 81-90y: 234.6[151.6-317.6]m); III) UULEX (61-70y: males - 9.6[8.5-10.7]min; females - 8.3[7.4-9.2]min; 71-80y: 8.3[7.1-9.9]min; 81-90y: 5.8[4.4-7.1]min. vs. 4.7[3.9-5.9]min.) and IV) 1STS (61-70y: males - 40.0[33.2-46.8]rep/min vs. females - 37.1[33.6-40.6]rep/min; 71-80y: 30.7[26.4-34.9]rep/min vs. 33.3[26.1-40.4]rep/min; 81-90y: 29.0[16.1-67.1]rep/min vs. 22.3[16.2-28.3]rep/min). Significant interactions between age and gender were only observed in the ISWT.

Conclusions
The population studied presented worse results in the 6MWT, similar results in the ISWT and better results in the 1STS test comparing with international studies [4-6]. No studies were found for the UULEX test. These differences highlight the importance of using population specific reference values in CRF assessment. Further studies with larger and representative sample sizes are needed to confirm results.

References

Keywords
Cardiorespiratory Fitness, Cardiorespiratory field tests, Reference values, Elderly population.

O54 Prevalence and factors associated with frailty in the elderly attended in ambulatory care
Clôris RB Grden1, Luciane PA Cabral1, Carla RB Rodrigues2, Péricles M Reche1, Pollyanna KO Borges1, Everson A Krum2
1Departamento de Enfermagem e Saúde Pública, Universidade Estadual de Ponta Grossa, 4748 Ponta Grossa, Paraná; 2Hospital Universitário Regional dos Campos Gerais, Universidade Estadual de Ponta Grossa, 84031-510 Ponta Grossa, Paraná

Correspondence: Clôris RB Grden (reginablanski@hotmail.com)

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Background
The aging process, understood as dynamic and progressive, contributes to the reduction of physical reserves and a higher prevalence of pathological processes, predisposing the elderly to frailty [1]. Canadian researchers define frailty as a multifactor syndrome involving biological, physical, cognitive, and social factors [2], which contribute significantly to disability and hospitalization [3]. Considered a modifiable syndrome, it is related to physiological changes, diseases, polypharmacy, malnutrition, social isolation and unfavourable economic situation [4, 5].

Objective
The objective of this study was to identify the prevalence and factors associated with frailty in the elderly attended in outpatient care. A cross-sectional study was carried out with 374 elderly individuals in outpatient care between October 2015 and March 2016. Data collection was applied to the Edmonton Fragility Scale [2]. Data were analysed by Stata software version 12 and described by measures of frequency, mean and standard deviation (SD). Prevalence ratios (PR) were calculated to investigate associations between independent variables and frailty. The adjusted prevalence ratios were obtained considering the following variables and frailty: the adjusted prevalence ratios were obtained considering the following variables and frailty:

Keywords
Prevalence, Frailty, Elderly population.

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independent variables that remained in the model. The statistical significance was $p < 0.05$. The study complied with national and international standards of research ethics involving human subjects and was approved by the Research Ethics Committee in Human Beings of the institution under registration CAAE: 34905214.0.0000.0105.

**Results**

The results showed a predominance of female (67.4%), married (54.4%), with low educational level (55.1%), who lived with relatives (46.3%). The mean age of participants was 67.9 years. Regarding the clinical variables, 97% of the elderly reported having some type of disease, 92.3% used medication, 56.9% had no urine loss, 4.5% used walking sticks, 65.8% denied falls and 69.8% hospitalization. Regarding the fragility syndrome, the mean score was 5.9 points, with 40.1% elderly classified as fragile and 59.9% non-fragile. After multiple regression analysis, the variables that remained associated with the fragility were gender ($p = 0.002$), low education ($p = 0.01$), falls ($p = 0.005$), urinary incontinence ($p = 0.000$) ($p = 0.001$), medications ($p = 0.02$) and hospitalization ($p = 0.001$).

**Conclusions**

The study identified important factors associated with frailty in the elderly attending the outpatient clinic. Such results may support the development of gerontological care plans aimed at preventing functional decline and negative outcomes of the syndrome.

**References**


**Keywords**

Aged, Frail Elderly, Prevalence, Geriatric Nursing.

**OS5**

**Trend of mortality for acute myocardial infarction in state Santa Catarina, Brazil, for the period from 1996 to 2014**

Pedro CM Morais1, Aline Pinho2, Daniel M Medeiros3, Giovanna G Vietta3, Catarina, Brazil; 2Hospital Universitário Polydoro Ernani de São Thiago, Universidade Federal de Santa Catarina, 88036-800 Florianópolis, Santa Catarina, Brasil; 3Universidade do Sul de Santa Catarina, Campus Pedra Branca, 88137-270 Palhoça, Santa Catarina, Brasil

**Correspondence:** Pedro CM Morais (pedromorais182@hotmail.com)

**BMC Health Services Research 2018, 18(Suppl 2):OS5**

**Background**

Acute Myocardial Infarction (AMI) is a public health problem in the world and in Brazil, due to the high morbimortality rates observed. Despite major advances in treatment, AMI accounts for 30% of deaths in Brazil.

**Objective**

To analyse the mortality trend due to acute myocardial infarction in the State of Santa Catarina, from 1996 to 2014.

**Methods**

Ecological study of time series, based on the Database of the Mortality Information System, made available by the Department of Informatics of SUS (DATASUS). Selected deaths by AMI, ICD-10, code I21, of the resident population in the state, according to gender and age group, performed simple linear regression. The Research Ethics Committee of the Southern University of Santa Catarina approved this study.

**Results**

There were 40,204 deaths from AMI between 1996 and 2014 in Santa Catarina, with small oscillations in mortality rates in the period, 40.33/100,000 inhabitants in 1996 and 36.58/100,000 in 2014 ($\beta = -0.082$, $p = 0.546$). There were higher rates in males, but stationary, with 49.41/100,000 inhabitants in 1996 and 45.62/100,00 in 2014 ($\beta = -0.008$; $p = 0.949$). The female sex presented a steady trend, with a rate of 31.19/100,000 inhabitants in 1996 and 27.49 / 100,000 in 2014 ($\beta = -0.113$; $p = 0.224$). The male and female age groups showed a decreasing and significant trend after 30 years. Male age group 60 and older presented high mortality rates, however, declining. It stands out that the male age group from 70 to 79 years of age presented a decrease in rates of -13,936 per year, with a variation from 626.51/100,000 inhabitants in 1996 to 379.21/100,000 inhabitants in 2014 ($p > 0.001$). In the male age group of 80 years or more the rate was 935.88/100,000 inhabitants in 1996 and 669.99/100,000 in 2014 ($\beta = -12.267$; $p = 0.004$). Female age group 70 and older presented high mortality rates. In the female age group of 70 to 79 years, there was a decrease in rates from 390.50/100,000 inhabitants in 1996 to 193.78/100,000 in 2014 ($\beta = -12.115$; $p < 0.001$). The female age group aged 80 years and over, from 811.78/100,000 inhabitants in 1996, decreased to 497.81/100,000 in 2014 ($\beta = -16.081$, $p < 0.001$).

**Conclusions**

The trend of AMI mortality in Santa Catarina is stationary for both genders but decreasing significantly in the age groups over 30 years, with the greatest reductions over 70 years.

**Keywords**

Acute Myocardial Infarction, Mortality rate, Ecological study.
Family conferences – the two year experience of a palliative care support team (PCST) in a tertiary hospital

Júlia Alves, Joana Mitra, Rita F Soares, Margarida Santos, Isabel Barbedo, Sara Silva, Elga Freire
Equipe Intra-hospitalar de Suporte em Cuidados Paliativos, Departamento de Medicina Interna, Centro Hospitalar do Porto, 4099-001 Porto, Portugal
Correspondence: Júlia Alves (juliasousaalves@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O57

Background
Family conference (FC) is an important work that represents an opportunity to evaluate family dynamics, provide anticipatory care and support feelings related to the loss of a loved one [1]. FC facilitates the communication between healthcare providers, patient and family and allows the discussion of different options and summarize consensus with the ultimate goal of problem solving, decision making and instituting a plan [2].

Objective
Describe the experience of FCs made by a PCST from 1 of January 2015 to 31 of December 2016.

Methods
Raw data from FCs registers was retrieved and a descriptive analysis was performed.

Results
We consulted 809 patients and 431 FCs were held (81% scheduled). In 56 FC the patient was present; when the patient was absent, most cases were due to clinical condition and in a minority the patient chose not to be present. Family members attending FCs were offspring in 67%, spouses in 23%, other relatives in 38% and the parents in 4% of cases. All meetings occurred in the presence of one physician and one nurse from the PCST. FCs were held because of patient discharge (88%), worsening of clinical condition (24%), family needs (59%), discussion of therapeutic goals (38%) and conspiracy of silence (1%). As a consultant team, the PCST is concerned with post-discharge and evaluates the needs of patients at home with the help of an ambulatory healthcare team or primary care team. Therefore, FCs have the objective of preparing families for patient discharge. During FC, the main subjects of discussion were post-discharge healthcare referral (94%), objectives of healthcare (84%), clinical information about diagnosis and prognosis (42%), symptom control (47%), management of expectations concerning the illness (73%), nutrition (12%) and family needs (psychological support in 17% and nursing instructions 10%).

Conclusions
There is an increasing number of FC and more are being requested by the referral healthcare team. To facilitate the registry of FC a document was elaborated and soon it will be made a software. This registry will allow an easier analysis and strategy planning to improve interventions and healthcare quality provided.

References

Keywords
Palliative care, Family, Health.
prescribed are nowadays more common. Unfortunately, the elevated rates of HbA1C and capillary glycaemia values demonstrate that dis-ease management is not effective, so it is urgent to implement pro-grams to help older people self-manage chronic condition.

References

Keywords
Medications Adherence, Patients, Aged, Polypharmacy, Diabetes Mellitus.

O59
Nurses’ perception of Computerized Information Systems impact on the global nurses’ workload
Paulino Sousa¹, Marisa Bailas²
¹Centro de Investigação em Tecnologias e Serviços de Saúde, 4200-450 Porto, Portugal ²Centro Hospitalar de São João, 4200-319 Porto, Portugal
Correspondence: Paulino Sousa (paulino@esenf.pt)
BMC Health Services Research 2018, 18(Suppl 2):O59

Background
Portugal has a story of almost two decades of computerized informa-tion systems use on health area, particularly in the nursing area, with the large-scale implementation of Computerized Information Systems to support nursing practice. We know that the use of electronic health information is compulsory for patient care delivery. We will undoubtedly be respon-sible for a substantial time-spent on the overall workload of nurses. Too often, we are confronted with nurses’ opinions that the use of computerized information systems (CIS) has a great impact on the overall nurses’ workload (35 to 50% of the global nurses’ workload).

Objective
To identify the perception of nurses on the time spent on CIS in use in a hospital and his impact on the global nurses’ workload.

Methods
A cross-sectional survey was applied to collect data from 148 nurses that use CIS in a hospital (medical and surgical services). This allowed knowing the average percentage of nurses’ perception time spent on the use of SClinico® and other information supports, as well as their distribution by a set of nursing activities in use of the system.

Results
The results showed that nurses consider that time spent on informa-tion supports has an average of 42.4% on their total working time: 33.5% on the use of SClinico® (mode and median of 30%; SD ±16.25) and 8.9 % (mode and median of 5 %; SD ±6.67) on nursing records in other non-computerized structures (particularly on paper). These values are overlapping to those presented in some national and international studies. However, results are higher than the real-time shown in studies of Silva (2001) and Sousa and colleagues (2015). Nurses who underwent training processes on Nursing Information System in use (SClinico®) and on ICNP® have differences in time-spent perception on the use of CIS.

Conclusions
A permanent issue in the debate on the use of CIS is the time spent in its use, in particular in the processes of data access, care planning, and record keeping. Nurses have the perception that the time spent on CIS has, in fact, an essential part of nursing practice, but with a high impact on the workload of nurses. However, there are several national and international studies that point out in certain contexts for a lower ‘real-time’ in the global nurses’ workload on the use of computerized information systems.

Keywords
Computerized Information Systems, Electronic health information, Nursing workload, Time spent.

O60
Pain in people 75 and older: association with activity patterns
Maria C Rocha, José G Sousa, Madalena G Silva
Phytotherapy Department, School of Health, Polytechnic Institute of Setúbal, 2910-761 Setúbal, Portugal
Correspondence: Madalena G Silva (madalena.gomesasilva@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O60

Background
The prevalence of pain amongst the elderly population (19.5% [1] to 52.8%(2)) may not be disregarded and varies depending on the age range and context. Regardless, pain in this population group has been associated with reduced functional capacity, changes in gait and sleep patterns, depression and reduced social participation [3]. Exercise has often been recommended as an intervention to manage pain in the elderly [4], however long-term adherence to exercise pro-grams is limited [5]. Characterization of pain and exploring its associ-ations with light intensity physical activity may provide a base for discussing alternative clinical interventions for the management of pain in this population group.

Objective
To characterize the presence, location and duration of pain in very old adults and investigate its association with light intensity physical activity.

Methods
A cross-sectional study was implemented with 65 participants aged above 75 years, without cognitive impairment, average age of 79.48 ± 4.98. Presence, location and duration of pain were assessed with the socio-demographic and clinical characterization questionnaire. Light intensity activity was characterized with an Activity Diary. Given de non-normal distribution, dichotomic nominal variables were ana-lysed with the biserial point correlation, and Spearmen’s rho was used for the remaining.

Results
Two thirds (61.5%) of our sample was female, with a low educational level (64.6%). Eighty three percent (n = 54) reported experiencing pain, and from these, 45 (83.3%) had pain for more than one year. Pain was mainly localized in the knees (n = 30) and in the lower back (n = 27). Our sample spent an average of 5h46min per day in seden-tary behaviour (< 1.5 METs) and 4h47min in physical activity of light intensity (> 1.5 and < 3 METs, Metabolic Equivalents). Physical activity of low intensity showed a non-significant association with the pres-ence of pain (p = 0.622) nor with the duration of pain (p = 0.525).

Conclusions
We conclude that our sample had a very high prevalence of pain for more than one year, and that this is not associated with the time spent in light intensity physical activity. Further studies are required to provide a better understanding of the association of specific types and location of pain and light intensity physical activity, before it can be promoted as a clinical intervention strategy.

References
Keywords
Pain, Activity, Older adults.

O61
Impact of the people with intellectual disability and proxies’ characteristics on quality of life assessment
Cristina Simões1,2, Sofia Santos1,3
1Economics and Social Sciences Department, Portuguese Catholic University, 3504-505 Viseu, Portugal; 2Study Center for Special Education, Faculdade de Motricidade Humana, University of Lisbon, 1499-002 Cruz Quebrada, Portugal; 3Unidade de Investigação e Desenvolvimento em Educação e Formação, Instituto de Educação, University of Lisbon, 1649-013 Lisbon, Portugal
Correspondence: Cristina Simões (cristina-ferreira@iol.pt)
BMC Health Services Research 2018, 18(Suppl 2):O61

Background
The quality of life (QoL) assessment should include self-report measures in the field of intellectual disability (ID), which provide useful information for personalized support plans and give those with ID the opportunity to express their own perspectives regarding themselves and their individual contexts of life. Nevertheless, the communication and understanding limitations of people with ID can be a barrier to obtaining self-report perceptions. The inclusion of a proxy who knows the individual with ID well has been used to overcome the difficulties of the subjective assessments.

Objective
This proposal aims to explore the factors that could potentially explain the disagreements in QoL assessment of people with ID and their proxies.

Methods
Data were collected from 207 participants: 69 people with ID, 69 practitioners and 69 family members. QoL was assessed by the Portuguese version of the Personal Outcomes Scale. Paired-sample t tests were performed to examine the differences between the mean scores. Multiple regressions were calculated to analyse the determinants that could explain the directional mean difference between people with ID, support staff, and family members.

Results
The personal and environmental characteristics of people with ID (gender, diagnosis, living circumstances, and type of transportation) and the characteristics of practitioners (age, education level, relationship, health status of the person with the ID) had scores with a medium explanation of the disagreements between those participants. The education level of support staff and the health status of the person with the ID had largely explained the discrepancies between people with ID and key workers. Furthermore, the results revealed that four characteristics were major predictors of disagreement between people with ID and family members: the age of the person with ID, the type of transportation, the self-reported health status of the person with ID, and the health status of the person with the ID, as assessed by the family members. Finally, robust factors seemed to explain the discrepancies between practitioners and family members: living circumstances, self-reported health status of the person with the ID, education level of the key worker and education level of family members.

Conclusions
Among other factors, the health status was a major predictor of the different perceptions on QoL assessment. Findings showed that it was possible to predict differences among the three groups of respondents. Strictly speaking, the personal and environmental characteristics of people with ID and proxies predicted the disagreement among the participants.

Keywords

O62
Factors that influence the decision on how and when to use a “health kiosk”
João Rodrigues1,4, Paulino Sousa2, Pedro Brandão3,4
1Administração Regional de Saúde do Norte, 4000-099 Porto, Portugal; 2Centro de Investigação em Tecnologias e Serviços de Saúde, 4200-450 Porto, Portugal; 3Faculdade de Ciências, Universidade do Porto, 4169-007 Porto, Portugal; 4Instituto de Telecomunicações, 1049-001 Lisboa, Portugal
Correspondence: João Rodrigues (joaorodrigues006@gmail.com)
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Background
Health kiosks have been recognized as an effective way to develop knowledge and capabilities of citizens, which can improve the promotion of a healthy behaviour. But several have been the problems that have hindered the large-scale implementation and use of health kiosks, one of the most prominent being the limited acceptance of technology by citizens.

Objective
To identify factors that influence the decision on how and when to use a health kiosk

Methods
This kiosk appears as an innovative project, allowing to monitor anthropometric data (weight and vital signs (heart rate, oximetry, and blood pressure) on a routine basis or prior to a medical appointment. This was an exploratory study, descriptive and correlational, of a cross-sectional study, with a mixed approach (quantitative and qualitative). In the elaboration of the instruments of data collection, we based on the Technological Acceptance Model (TAM). The analysis of the factors influencing the decision on how and when to use the “health check” was supported by the constructs; perceived utility, perceived ease of use, perceived credibility, and perceived knowledge.

Results
92 citizens accepted to participate in the study. But, 34 refused to use the kiosk (justifying their refusal): they considered “not having enough time to use the kiosk”, most of which verbalized that “they were afraid of losing their medical appointment if they did not hear the call”, “not feeling able to use it”, “not being able to use computers” or “not associating any utility in its use”. The kiosk was used by 58 people who had come to the Health Centre with different objectives: nursing appointment (41.4%), medical consultation (36.2%), administrative contact (13.8%) and the remaining were companions of other health care users (5.6%). Participants were mostly female (70.7%), with an average of 51.3 years (median 51.4, SD±17.6). They reported using technological devices: 94.8% used mobile phones (62.1% has “smartphones”) and 60.3% use computers. Only one participant had experienced prior “health kiosk” use. Users appreciated the utility (94.1%) and easy use (85.7%), as well as the credibility (94.6%) of the kiosk. The perceived knowledge was considered by 80.4% of participants as very good (5.4%) or good (75.0%).

Conclusions
TAM was crucial to understand the strength that some of its dimensions may have as factors that influence the decision on how and when to use the “health kiosk”. Among the citizens who used the health kiosk, mostly found it useful, easy to use, credible and secure.

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Keywords
Health kiosk, Technological Acceptance Mode, Monitoring.
Delirium care: a survey into nursing perceptions and knowledge
Marta Bento\textsuperscript{1}, Rita Marques\textsuperscript{2}
\textsuperscript{1}Universidade Católica Portuguesa, 1649-023 Lisbon, Portugal \textsuperscript{2}Hospital de Santa Maria, Centro Hospitalar Lisboa Norte, 1649-035 Lisbon, Portugal

Correspondence: Marta Bento (mrasofial81@hotmail.com)

BMC Health Services Research 2018, 18(Suppl 2):O63

Background
Delirium is a reversible cognitive manifestation of sudden onset, developing in a matter of hours or days; characterized by a fluctuating course of disturbed attention, memory and perception [1]. Although common, this syndrome is often under-diagnosed and nursing staff are in the best position to recognize, prevent and monitoring delirium symptoms. The current approach to delirium care seems to be insufficient and nurses need to receive more support and guidance providing high quality care [2]. The education of nurses in all care settings can provide the foundation to address this massive international challenge.

Objective
The aim of the study is to assess nursing knowledge, in order to understand and perceive delirious adult/elderly patients.

Methods
In this exploratory study, we applied a questionnaire with closed questions and the sample consisted of 49 nurses working at an ER of a Central Hospital at Lisbon, during the month of December 2017. In order to safeguard ethical issues, we requested approval and informed consent to all participants in the study, with the anonymity and confidentiality of the data being ensured.

Results
The data yielded revealed that there was a high level of knowledge on the definition of delirium (93.8%) and also on the application of the Confusion Assessment Method (86.4%), although in this unit this instrument is not applied routinely. The analysis also reveals that there is a very high level of knowledge about the characteristics of a delirious patients and 100% of the nursing Staff recognize these patients, has not always aggressive. Furthermore, the dehydration and the poor nutrition were identified has risk factors for delirium (95.8% and 91.8%, respectively). On the contrary 63.3% (n = 31) of the respondents assumed that a patient with impaired vision isn’t at increased risk of delirium or neither 22.4% (n = 11) the risk for delirium increases with age 22.4% (n = 11). Equally important, 28.6% (n = 14) of the respondents did not know that patients with delirium present higher mortality rates.

Conclusions
Despite the literature assumes in same hospital settings nurses have insufficient knowledge of delirium-related information, the results of this study evidence an overall positively answered mean score, showing a high level of knowledge of delirium and its risk factors. Nurses have a key role to accurately recognizing and caring for delirious patients given the poor outcomes of untreated delirium.

References

Keywords
Delirium, Nursing, Knowledge, Risk factors.

Nurses’ satisfaction with the use of Health Information System in Funchal hospitals
Plácida Silva\textsuperscript{1}, Paulino Sousa\textsuperscript{2}, Élvio Jesus\textsuperscript{1}
\textsuperscript{1}Hospital Dr. Nélio Mendonça, 9004-514 Funchal, Portugal \textsuperscript{2}Centro de Investigação em Tecnologias e Serviços de Saúde, 4200-450 Porto, Portugal

Correspondence: Plácida Silva (placidasilva@hotmail.com)

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Background
The evaluation of the Health Information System (HIS) is a fundamental activity to determine the success of the system and guarantee the continuity of its use. That is why it is important to know the true impact on the use and satisfaction of its users. In recent years, we have seen in Portugal different studies on nurses’ satisfaction with HIS use. However, none of the studies refers user satisfaction with the HIS structure that supports the practice of nurses in the Autonomous Region of Madeira (ARM).

Objective
To identify dimensions and level of nurses’ satisfaction with the HIS in use.

Methods
A cross-sectional, exploratory and descriptive study was carried out in the ARM, in inpatient units of Funchal Hospitals. Data collection was supported by the application of the “User Satisfaction Questionnaire for Nursing Information Systems” based on DeLone & McLean Model of Information System Success (2003). This instrument uses a 5-point Likert scale structure with a semantic differential operationalized “1-unsatisfied” and “5-very satisfied”, in an increasing logic of level of satisfaction, in which there is no neutral intermediate point.

Results
The adherence rate of the study population was 50.5%, corresponding to a sample of 283 nurses. The exploratory factor analysis process was reduced to 5 factors, similar to previous studies which resulted in the following dimensions: 1) information sharing; 2) structure and content of information needed for decision-making; 3) support structures and HIS contributions; 4) Security, data protection and technical support; and 5) graphical data presentation. The dimension “satisfaction with access to necessary information for decision making” with an average value of 3.13 (Median 3, SD ±0.70), reports the area where the higher level of satisfaction is observed. The dimension “support structures and HIS contributions” has the lower average value of 2.81 (Median 2.8, SD ±0.64), The overall “nurses’ satisfaction with HIS in use” was 2.96 (±0.57), with a median of 3 on a Likert scale. This overall result reports a good level of nurses’ satisfaction with the HIS that they use.

Conclusions
This study allowed us to identify dimensions that incorporate the DeLone & McLean Model of Information System Success. At the same time, it has allowed us to identify factors that determine the level of satisfaction of the nurses with the HIS that they use and being able to determine the “use” and “intention to use them”.

Keywords
Health Information Systems, Nurses, Satisfaction, Evaluation.

How prevalent are psychoactive substances among health students?
Sandra Ventura\textsuperscript{1}, André RTS Araújo\textsuperscript{2}, João Leitão\textsuperscript{2}, Odília D Cavaco\textsuperscript{1}, Rui Correia\textsuperscript{2}, Maria J. Nunes\textsuperscript{2}
\textsuperscript{1}Escola Superior de Saúde, Instituto Politécnico da Guarda, 6300-749 Guarda, Portugal; \textsuperscript{2}Centro de Respostas Integradas da Guarda, Administração Regional de Saúde do Centro, 6300-725 Guarda, Portugal

Correspondence: Sandra Ventura (sventura@ipg.pt)

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Background
Consumption of psychoactive substances is widespread among young adolescents and young adults and constitutes a public health problem with significant consequences for individuals and societies throughout the world. The main consequences depend on the consumption pattern of the substance used and may result from the immediate or cumulative toxic effect of the substance consumed, from intoxication or psychoactive effects, or from addiction or addiction syndrome. Particularly alcohol and tobacco consumptions are the second and third risk factors of morbidity and mortality in Europe. Harmful use of alcohol, under acute and chronic conditions, can have serious developmental and social consequences, including violence, neglect and accidents, as well as health problems. Tobacco use also has negative consequences on health and social life.
Objective
In this context, the objective of this study was to characterize the consumption of psychoactive substances by students of the Superior Health School of the Polytechnic Institute of Guarda and to reflect on prevention strategies to be implemented to dissease and reduce consumption among students.

Methods
A questionnaire was applied to the students and we collected 261 answers, from a total of 175 students of the Nursing Course and 88 of the Pharmacy Course.

Results
The results obtained indicate that the most consumed substances were, in descending order: alcohol, tobacco, psychoactive drugs and illicit substances. Regarding alcohol experimentation, it was found that 76.6% of nursing students and 85.2% of pharmacy students had already consumed alcohol. These data were higher than the national prevalence throughout life in 2015 (71%). The consumption of alcohol by nursing students (74.3%) and by pharmacy students (89.8%) was also higher than the consumption of Portuguese young people between 13 and 18 years old (62%). Tobacco consumption by nursing and pharmacy students were of 51.6% and 56.8%, respectively, both higher than the national data of 40%. The consumption of tobacco was of 39.3% by nursing students and 45.5% by pharmacy students, and it was also higher than the 30% reported for national consumption. Illicit substances were the least consumed, with a prevalence throughout life of 13.3% and 9.0%, respectively, by nursing and pharmacy students, inferior than the national data (19%). Cannabis was the illicit substance more consumed by either nursing and pharmacy students.

Conclusions
These results indicate that there is work to be done in the prevention and dissuasion of consumption of psychoactive substances by our student community.

Keywords
Psychoactive substances, Consumption, Prevalence, Prevention, Dissuasion.

O66
Diabetes Mellitus as a key indirect causal factor for pressure ulcer development
Pedro Sardo1,2, Jenifer Guedes2, José Alvarelhão1, Elsa Melo1
1School of Health Sciences, University of Aveiro, 3810-193 Aveiro, Portugal; 2Centro Hospitalar do Baixo Vouga, 3810-501 Aveiro, Portugal
Correspondence: Pedro Sardo (pedro.sardo@ua.pt)
BMC Health Services Research 2018, 18(Suppl 2):6O66

Background
Ensuring patient safety in healthcare is a challenge [1-6]. With the growing Diabetes Mellitus incidence, healthcare professionals and planners are encouraged to pay further attention to the major complications of this disorder [3]. According to EPUAP and EWMA [3], poor circulation and infection are among the most common complications that effect diabetic patients. A recent pressure ulcer conceptual framework [7, 8] identified Diabetes Mellitus as a key indirect causal factor (and poor perfusion as a direct causal factor) for pressure ulcer development and encourages the development of clinical studies that explore the correlation(s) between these specific risk factors and pressure ulcer development.

Objective
To identify the influence of Diabetes Mellitus on pressure ulcer development in adult patients admitted to medical and surgical wards in 3 Portuguese hospitals.

Methods
Cross sectional design survey developed on June 16th, 2015 with 236 adult patients admitted to medical and surgical wards in 3 Portuguese hospitals. The study was performed after Hospital Council Board and Ethics Committee approval (Reference Number 049688). Data were analysed using SPSS v25.0. Descriptive statistics were calculated for the sample characterization. Pressure ulcer risk, prevalence and incidence were calculated according to EPUAP statement [9]. Odds ratio (OR) was calculated by univariate logistic regression.

Results
This study included a sample of 236 participants with the median age of 76 years (Q1 = 62 years; Q3 = 83 years). The majority of the participants was male (56.8%), admitted trough the emergency service (80.9%) and stayed in medical units (60.2%). On the day of the survey, 121 (51.3%) participants were classified as “high risk of pressure ulcer development” (Braden Scale score ≥ 16); 45 (19.1%) participants had at least one pressure ulcer documented; 7 (3.0%) participants developed a new pressure ulcer since the admission in inpatient setting; and 67 (28.4%) participants had Diabetes Mellitus. Using a univariate logistic regression model, the odds of developing a pressure ulcer during the length of inpatient stay were significantly higher for the participants with Diabetes Mellitus with OR = 6.73 (95% CI:1.27-35.61, Nagelkerke $R^2 = 0.103$) compared to the other participants.

Conclusions
This study supports the pressure ulcer conceptual framework proposed by Coleman, Nelson [7] and Coleman, Nixon [8], showing that Diabetes Mellitus is a key (indirect) causal factor for pressure ulcer development in inpatient settings. However, further studies are needed in order to understand the influence of Diabetes Mellitus on skin and tissue (poor) perfusion and consequently on pressure ulcer development.

Acknowledgements
Thanks are due to “Centro Hospitalar Baixo Vouga, EPE” (Portugal), particularly to the Nursing Council Board, head nurses and to the nurses that recorded the data in the medical and surgical services of Águeda Hospital, Aveiro Hospital and Estareja Hospital.

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2. EPUAP, EWMA. The time to invest in patient safety and pressure ulcer prevention is now! 2017.

Keywords
Diabetes Mellitus, Nursing Assessment, Portugal, Pressure Ulcer, Risk Assessment

O67
Frailty syndrome in the elderly hospitalized in a teaching hospital
Luciane Cabral, Clíris Regina, Bruno A Condás, Péricles Reche, Danielle Bordim, Jacy Sousa
Departamento de Enfermagem e Saúde Pública, Universidade Estadual de Ponta Grossa, 4748 Ponta Grossa, Paraná, Brasil
Correspondence: Luciane Cabral (lucianecapacabra@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O67
Background
In Brazil and in the world, the growth of the elderly population is an indisputable reality, so it is necessary to identify the factors that favor the sickness of this age group, with emphasis on the fragility, which can be defined as a syndrome which presents innumerable causes and is characterized by a set of clinical manifestations, such as decreased in strength, endurance and physiological function, collaborating to make the individual more vulnerable to addiction and/or death [1].

Objective
In view of the above, the present study aimed to evaluate the fragility syndrome of the elderly hospitalized in a teaching hospital.

Methods
A cross-sectional study, carried out with a convenience sample of 107 elderly patients admitted to the emergency room, at the medical, surgical and neurology clinic of the medical, surgical and neurology of a teaching hospital in the Campos Gerais region, from October 2016 to April 2017. Data collection included the application of the Mini Mental State Examination [2] for cognitive screening and Edmonton Fragility Scale [3], culturally adapted to the Portuguese language in Brazil [4]. Data were analysed using Stata®12 software. The association was verified through simple linear regression (Fisher’s F and Student’s t tests), significance level of p = 0.05. The project was approved by the Ethics Committee of the State University of Ponta Grossa (CAAE nº 34905214.0.0000.1005).

Results
The results showed a predominance of females (58.9%), married (61.0%), low schooling (71.0%), living with spouse (n = 42, 39.3%), considered their income satisfactory (50.5%). The mean age of participants was 70.3 years. Regarding clinical variables, 99.1% had a disease, 36.5% used medication and 50.5% reported hospitalization in the last 12 months. The fragility evaluation identified that 19.6% of the elderly were nonfragile, 24.3% apparently vulnerable, 26.2% had mild fragility, 15.9% moderate and 14.0% severe. It was found that any level of schooling used medication (p = 0.001), solitude (p = 0.001), loss of urine (p = 0.001) and hospitalization in the last 12 months (p = 0.001) and was associated with the fragility syndrome.

Conclusions
The importance of early detection of the syndrome is emphasized through the use of an instrument that is valid, reliable and easy to apply by the health team, such as the Edmonton Fragility Scale. The results presented can support the planning of health care, considering the characteristics and demands of the elderly who are hospitalized, thus contributing to improve the quality of care provided.

References

Keywords
Aged, Frail Elderly, Geriatric Nursing.

O68 Braden Scale accuracy tests
Pedro Sardo1,2, Jenifer Guedes3, José Alvarellhão1, Elsa Melo1
1School of Health Sciences, University of Aveiro, 3810-193 Aveiro, Portugal. 2Centro Hospitalar do Baixo Vouga, 3810-501 Aveiro, Portugal.

Correspondence: Pedro Sordo (pedro.sordo@ua.pt)

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Background
Pressure ulcers management is a challenge [1-6]. Portuguese guidelines [7] encourage the implementation of regular pressure ulcer risk assessments through the application of the Braden Scale and the patients’ categorisation into two levels of risk (defined by cut-off point of 16). However, the development of pressure ulcer(s) is complex and multifactorial [8] and whenever the Braden Scale score falls below 18, each patient functional deficit and/or risk factor should be individually addressed [9].

Objective
To analyse the Braden Scale accuracy tests in adult patients admitted to general wards in a Portuguese hospital during one year, using different cut-off points.

Methods
The study was designed as a retrospective cohort analysis of electronic health record database from 6,552 adult patients admitted without any pressure ulcer in medical and surgical wards in a Portuguese hospital during 2012. All data were extracted after Hospital Council Board and Ethics Committee approval (Reference Number 049688), Braden Scale Accuracy Tests (BSAT) such as sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), and the area under the curve (AUC) were assessed [10].

Results
The study included 6,552 participants with a mean age of 64 years and 6 months. The majority of participants was male (52.6%); admitted through emergency service (69.1%); in surgical (64.5%) units. During the length of stay 153 (2.3%) participants developed (at least) one pressure ulcer. Considering the cut-off point of 15, the BSAT showed: sensitivity of 50%(95%CI:42%-58%); specificity of 82%(95%CI:81%-83%); PPV of 6%(95%CI:5%-8%); NPV 99%(95%CI:99%-99%); and AUC of 66%(95%CI:61%-71%). Considering the cut-off point of 16, the BSAT showed: sensitivity of 63%(95%CI:55%-71%); specificity of 74%(95%CI:73%-75%); PPV of 5%(95%CI:4%-7%); NPV 99%(95%CI:98%-99%); and AUC of 69%(95%CI:64%-73%). Considering the cut-off point of 17 the BSAT showed: sensitivity of 78%(95%CI:71%-84%); specificity of 63%(95%CI:61%-64%); PPV of 5%(95%CI:4%-6%); NPV 99%(95%CI:99%-99%); and AUC of 71%(95%CI:67%-74%).

Conclusions
Although our BSATs follow the trend of the results found in a recent systematic review [11], they showed some of the limitations of the patients’ categorisation into two levels of risk according to a specific cut-off value. Like Braden [9], we believe that this assessment tool should be supplied with clinical judgment in order to identify patients’ specific risk factors that should be individually addressed with accurate preventive interventions. Furthermore, in order to develop evidence-based practice, we should create a minimum data set for pressure ulcer prevention, assessment and documentation [12-14] based on patients’ characteristics, international guidelines [15] and conceptual frameworks [12-14].

References
1. EPUAP, EWMA. Patient safety across Europe: the perspective of pressure ulcers. 2017.
2. EPUAP, EWMA. The time to invest in patient safety and pressure ulcer prevention is now! 2017.
Background

Primary school students usually have very little previous knowledge about a number of educational issues. So, it is important to create moments where the students can tell whatever they know about a number of educational issues. So, it is important to create a systematic routine throughout life. On the other hand, it allows to eradicate some of the alternative conceptions that some 1st cycle students present on some issues [2], as the notion about the morphological view of microorganisms away from reality, idealizing them similar to animals [3,4,5]. There is evidence that children are able to learn about microorganisms at this age [3,4,5] and it is desirable that it occurs as early as possible, avoiding late conceptual changes that are difficult to reconstruct in their entirety [4]. For some authors [6,7], children should realize that the knowledge learned in the classroom can be applied in their daily lives.

Objective

In this context and with the purpose of promoting scientific and critical literacy, we developed an activity about hand hygiene because handwashing should be learned and be a properly reasoned behaviour.

Methods

The activities were developed by all 26 students in the class A, 2nd grade of the School EB1/JI Picua. The students’ age ranged from 7 to 8 years, with 54% (14) boys and 46% (12) girls. It started with the question “Handwashing: Why, When, How?”. According to the conceptions expressed by the students the appropriate theoretical contents were presented in a gradual and interactive way. This was followed by the experimental procedure with permanent monitoring and support based on the succeeding steps: role-playing stages for proper handwashing; applied activity; listing expected results; observation of cultures and microscopic observation of microorganisms, recording and reflection about the results achieved.

Results

All groups showed the expected results, i.e., higher microbial growth in the quadrants corresponding to unwashed hands.

Conclusions

Giving the results and the theoretical framework, the students learned proper concepts on the subject, which allowed them a better understanding of the world around them.

References


Keywords

Hygiene, Handwashing, 1st cycle, Monitored support, Microorganisms.
Objective
Identify the risk of accidental falls in an independent elderly population by using functional tests that can be routinely applied in clinical practice and evaluate the influence of medication in the risk of falling.

Methods
The sample consisted of 108 individuals who attended a health care facility between October 2016-January 2017. Inclusion criteria: age 65-85, Functional Independence Measure (FIM) ≥ 120 and Timed Up and Go (TUG) ≤ 12s. Individuals with serious cognitive or motor impairment were excluded. A form was filled with sociodemographic data, daily medication and history of falls. Handgrip strength was measured. Fear of falling was assessed using the Activities-specific Balance Confidence (ABC) scale. Participation was evaluated using the Activities and Participation Profile related to Mobility (APPM). Informed written consent was obtained for all participants.

Results
The average age was 72.28±6.02. The majority of subjects were female (54.6%). Fallers were older, had lower ABC and handgrip strength. ABC showed strong negative associations with APPM. All of the functional parameters were affected by age, with older individuals performing worse than younger participants. Polypharmacy was identified in 41.7% and increased the risk of falls (OR = 3.597; CI 95% 1.174-11.024; p = 0.025). Individuals taking antidepressants showed an increased risk of falls (OR = 9.467; CI 95% 2.337-38.495; p = 0.002). Anti-arrhythmic drugs (p = 0.002), benzodiazepines (p = 0.015) and other CNS-acting medication (p = 0.039) negatively influenced ABC scores. APPM scores were higher in subjects who reported taking CNS-acting medication (p = 0.012) and anti-arrhythmic medication (p = 0.035).

Conclusions
Individuals with low balance confidence showed higher restrictions in participation related to mobility. All of the functional parameters evaluated in this study were affected by age. These results stress that a comprehensive and multifactorial evaluation of risk factors for falls in older people and the adoption of interventions tailored to this age group, which could include a reassessment of their usual medication, are necessary in order to reduce fall risk and fall-related injury.

Keywords
Accidental falls, Risk factors, Elderly, Community-dwelling, Polypharmacy.

Background
For the last 10 years, Ambient Assisted Living (AAL) solutions have been conquering an important place in policies addressing economic and social challenges resulting from population ageing [1]. The AAL concept corresponds to a new paradigm building on ubiquitous computing devices and new interaction forms to improve older adults’ health, autonomy and security [2]. In spite of promising contributions of AAL solutions for ageing in place, low adoption by end users was reported [3-5]. This is thought to result from the intersection of technology features, user characteristics and attitudes [6]. Research has suggested that among attitudinal factors preventing adoption of these solutions there is a lack of trust, substantiated, among other factors, by user concerns about data security and privacy [5,7-10]. Digital advisory services for AAL solutions have to foster not only user’s trust on the advisory service per se, but also on AAL products and services and the web communication within a community.

Objective
To analyse stakeholders’ attitudes and requirements towards AAL digital advisory services, applying the findings to develop a pan-European advisory and decision-support platform for AAL solutions (ActiveAdvice).

Methods
A qualitative approach was used. Thirty-eight semi-structured interviews with AAL stakeholders—older adults and informal caregivers, businesses and government representatives—were conducted in six European countries (Austria, Switzerland, Belgium, Netherlands, Portugal and UK). The data was analysed using the matrix method [11].

Results
For the uptake of AAL digital advisory services, the level of user’s trust in the system seems to be critical. Features emerging as crucial to foment trust in digital advisory services were threefold: presence of security and privacy cues; personalization-related cues; and community features, including availability of client-to-client interactions and feedback given by reliable peers or experts. Older adults expressed their interest in becoming active in a digital community if provided an environment perceived as secure and, simultaneously, easy to use.

Conclusions
Building trust in AAL digital advisory services depends on multiple and complex user requirements. Security issues have shown to be of utmost relevance due to the nature of information exchanged, i.e. personal, health-related and sensitive data, and generalization preferences, with privacy and security cues having primacy for Baby Boomers, as supported by previous research [12]. These findings stress the need for a paradigm shift towards user-centred and user empowering models and mechanisms for securing the interaction with systems (e.g. authentication mechanisms, access control models and visualization techniques; e.g. ScTrAACe model) [13].

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References
O72 Self-confidence for emergency intervention and nurses’ perceptions of importance of the Intra-Hospital Emergency Team

Background

The Intra-Hospital Emergency Team (IHET) has emerged to respond to situations of clinical deterioration of hospitalized patients, being nurses the fundamental links in the activation. During a situation of clinical deterioration with the need for IHET intervention, the actions of nurses in inpatient services depend on many factors. To facilitate the activation and effectiveness of this team, nurses must have self-confidence to carry out the activation of IHET. Nurses believe that IHET’s intervention is important in the pursuit for safe care and that the most important ingredient for the effective use of this team is the nurse.

Objective

This study aims to evaluate the level of self-confidence for emergency intervention of nurses and to identify the nurses’ perceptions of the importance of the IHET.

Methods

This correlational study included 129 nurses from the Centro Hospitalar de Leiria who answered a questionnaire about the perception of IHET importance and the self-confidence scale for emergency situations validated for the Portuguese population by Martins et al. (2014), which consists of 12 items with Likert type responses. Pearson correlation and t-student were used for data analysis.

Results

In this study, 84% were female nurses with a mean age of 39.70 ± 9.02 years, with an average professional experience of 16.97 ± 8.95 years, and the majority with training in the emergency area (94%). The mean self-confidence level of the nurses was 3.263 ± 0.571, for a maximum of 5 points. Regarding the nurses’ perception of importance of the IHET, a positive tendency was observed (results ranged from 3.426 ± 0.570 to 4.775 ± 0.419). A partial relation between the nurses’ self-confidence and the level of self-confidence (r = 0.25; p = 0.004), the training (t = 6.143; p = 0.0001) and the level of self-confidence (r = -0.205; p = 0.020) with the level of self-confidence is highlighted.

Conclusions

In this study, regarding the self-confidence for emergency intervention, the nurses demonstrated confidence, albeit modesty. Likewise, they presented a tendency towards positive agreement regarding the importance of IHET. Of note, the higher the experience of the nurses, the greater the importance attributed to the IHET. Finally, we verified that the higher the nurse’s self-confidence index, the lower the feeling of insecurity in an emergency situation.

Keywords

Hospital Rapid Response Team, Nursing, Emergency situation, Perception of importance, Self-confidence in emergency
Keywords
Elderly, Cognitive impairment, Functional status, Nutritional assessment, Malnutrition.

O74
The evaluation of nursing care provided by Integrated Continuing Care Teams
Carlos Vilela1,2, Paulino Sousa2, Filipe Pereira2
1Institute of Health Sciences, Portuguese Catholic University, 1649-023 Lisboa, Portugal; 2Nursing School of Porto, 4200-072 Porto, Portugal
Correspondence: Carlos Vilela (carlosvilela@esenf.pt)
BMC Health Services Research 2018, 18(Suppl 2):O74

Background
The evaluation of nursing care is an imperative for the continuous development of quality improvement and for the cyclical re-definition of action plans that correspond to the real needs of the population. In the specific case of the Integrated Continuing Care Teams (ICCT), inserted in the National Network of Continued Integrated Care of Portugal, it is justified the use of a panel of indicators of health gains “Sensitive to Nursing Care”, given the nature of the services provided in these units, which helps to measure the clinical results obtained.

Objective
1) To identify the main nursing care needs of ICCT clients; and 2) Identify health gains sensitive to nursing care related to those needs.

Methods
Based on the definition model of indicators “sensitive to nursing care”, we developed a quantitative study-exploratory, descriptive and correlational, using the analysis of the nursing documentation available in Information Systems in use, in a convenience sample of 217 cases, attended in four ICCT of the northern region of Portugal, from October 2012 to May 2013.

Results
From the analysis of 9,258 documented nursing diagnoses, it was possible to generate eight “types” of health gains indicators. Five related to the dependent person and three referring to the family caregiver (FC). Here the great incidence of the care provided in these ICCT was revealed, where the Gains in autonomy/independence in the universal requirements of self-care and Gains in knowledge of the FC were the most representative areas of the care provided. Then, came the domains of Gains in the evolution of nursing diagnoses of the dependent person (“others”) and Gains in knowledge of the dependent person. Approximately 10% of the results computed were in areas that focused on Gains in FC performance (11.20%), Gains in performance of dependent persons (10.43%) and Gains in the prevention of Ulcers of Pressure (9.32%). With an order of magnitude in the order of 3.30% emerged the field of indicators related to Gains in the evolution of nursing diagnoses centred on the Role of Care Provider.

Conclusions
Reflecting on these results allows a more effective approach to the representation of nursing care in the evaluation of quality and, certainly, a better redefinition of the panel of indicators at the national level, with “sensitivity” to the nursing work developed by ICCT.

Healthcare Quality Indicators, Quality of Health Care, Home Care Services, Nursing Care, Nursing Care Management.

O75
Psychosocial impact of the powered wheelchair on the social participation of its users
Inês Domingues1, João Pinheiro1, Anaabela Martins1, Patricia Francisco2
1Faculty of Medicine, University of Coimbra, 3004-504 Coimbra, Portugal; 2Physiotherapy Department, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal
Correspondence: Inês Domingues (inesfdomingues@gmail.com)
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Background
There is a growing prevalence of disability worldwide, which indicates an increasing number of persons who might benefit from assistive technologies. Several studies showed positive effects of the use of assistive technologies on activity and participation of adults with mobility impairments [1, 2], as well as on psychosocial factors [3, 4].

Objective
The purpose of this study is to assess the psychosocial impact of the powered wheelchair, evaluating its repercussions on the social participation of its users.

Methods
Design - Observational, descriptive, cross-sectional study; Setting – All data was collected from May to October 2017; Participants - 30 powered wheelchair users with mean age of 40.63 years old (60% male) with diverse medical conditions (SCI, TBI, CP, among others); Main outcome measures - Interviews were conducted by an independent researcher using the Quebec User Evaluation of Satisfaction with Assistive Technology (QUEST), the Psychosocial Impact of Assistive Devices Scale (PIADS) and the Activities and Participation Profile Related to Mobility (PAPM), in addition to demographic, clinical and wheelchair-related questions.

Results
Participants were quite satisfied with both the assistive technologies and the related services, with the lowest QUEST scores belonging to those who had been using their wheelchairs for a longer period of time. PAPM scores revealed significant restrictions in participation (6.7% of participants with mild restrictions, 56.7% with moderate restrictions and 36.7% with severe restrictions), with a worst participation profile also among the users who had the wheelchairs for a longer period. The most satisfied users were the ones with better performance in terms of social participation. PIADS scores showed a positive impact of the powered wheelchairs in all subscales, with the following average scores: total 1.37, competence 1.39, adaptability 1.32 and self-esteem 1.38. The psychosocial impact, in terms of adaptability, was higher among users who transitioned from a manual wheelchair to a powered wheelchair compared to those who already had a powered wheelchair previously (1.85 vs 1.10; p = 0.02).

Conclusions
There was an overall positive psychosocial impact of powered wheelchairs, and, therefore, an increase in the quality of life of the users. Adaptability to the device seems to be the most contributing factor to social participation.

References

Keywords
Assistive technologies, Powered wheelchair, Psychosocial impact, Social participation.

O76
Work and breastfeeding: mom’s double duty
Rita MF Leal1, Amâncio AS Carvalho2, Marília S Rua1
1School of Health, University of Aveiro, 3810-193 Aveiro, Portugal; 2School of Health, University of Trás-os-Montes e Alto Douro, 5000-801 Vila Real, Portugal
Correspondence: Rita MF Leal (ritamariaferreiraleal@gmail.com)
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Keywords
Modern working women, Work and family, Breastfeeding, Maternal employment.
Background
Work is known to be an obstacle to breastfeeding (BF) continuation [1–5].

Objective
To analyse if there is a relationship between the employment status of the mother, the age of the child when she returns to work, the level of difficulty in reconciling work with BF and BF duration.

Methods
An observational, descriptive-correlational and cross-sectional study was conducted. The population comprised mothers who had a biological child in 2012 and 2013 in the Centre region of Portugal. A non-probabilistic sample (n = 427) was collected using an online questionnaire with snowball effect from November 2015 to September 2016. Data was analysed using SPSS software.

Results
Most women had difficulties in reconciling work with BF (72.5%). Of these, 26.6% said that conciliating work and BF was "very difficult" or "difficult"; while 73.4% said they had "some difficulty" or "very little difficulty". Job status (employed versus unemployed) did not present a statistically significant relationship with BF duration. As to the age of the child when the mother returned to work, we verified a statistically significant relationship (p = 0.001) with BF duration. The level of difficulty the mother experienced in reconciling her job with BF also presented a statistically significant relationship (p = 0.002) with BF duration.

Conclusions
The majority of mothers reported difficulties in reconciling work with BF. Women who returned to work before their child was 6 months old had shorter BF duration. This reinforces the need to explore family's timely expectations, and plan strategies to promote an effective management of work and BF. In this context, we believe there is a need to establish in our culture jurisdiction policies that favour BF and work. Health professionals should act as mediators in the definition of family-oriented health policies. In this case, the extension of a parental leave for mothers up to 6 months postpartum, the existence of a place at work where breastfeeding mothers can extract and conserve their breastmilk or the existence of day-care centres in the workplace, in accordance to the Global Strategy for Infant and Young Child Feeding [6,7], may prolong BF duration and ease mothers difficulty in managing BF when returning to work.

References

Keywords
Breastfeeding, Employment, Job, Parental leave.

O77 Health information shared in blogs by breast cancer survivors living in Portugal
Francisca MMC Pinto1, Paulino AF Sousa2, Maria RSP Esteves1,2
1Universidade Católica Portuguesa, 4169-005 Porto, Portugal; 2Escola Superior de Enfermagem do Porto, 4200-072 Porto, Portugal; 3Centro de Investigação em Tecnologias e Serviços de Saúde, 4200-450 Porto, Portugal; 4Cooperativa de Ensino Superior Politécnico e Universitário, 4560-462 Penafiel, Portugal; 5Instituto de Investigação e Formação Avançada em Ciências e Tecnologias Saúde, 4560-462 Penafiel, Portugal
Correspondence: Francisca MMC Pinto (franciscampinto@gmail.com)

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Background
Breast cancer survivors (BCS), and other cancer patients, are digital social networks users; have their personal blogs where share their life/disease experiences after being diagnosed for cancer [1, 2]. Research on blogging activity among BCS is scarce and suggests that it is multifaceted activity with several purposes: self-management of emotions, problem-solving, and sharing information [3]. But the question remains: what health information is share by BCS in blogosphere?

Objective
The present work reports the results of a study that explored personal blogs of BCS who lives in Portugal, with focus on written health information that was posted and/or commented.

Methods
A qualitative study design and thematic content analysis. Blog selection by snowball strategy that included 3 phases: I) phase 1: first 20 search results on Google, with Portuguese keywords “blogues cancro da mama”; II) phase 2 and 3: links to other blogs that are present on each blog selected on phase 1 and 2, respectively. Blogs included for analysis met all criteria for inclusion: I) personal blog of women self-identified with a breast cancer diagnosis; II) blogger profile allows to confirm residence in Portugal; III) blog is public domain; IV) blog must present data related to post-primary treatment phase. Data collection was done between March–November, 2017. The scope analysis started on first post after finish primary treatment for breast cancer and ended in blog’s last post at time we finished to read it.

Results
38 blogs were included for analysis. Results refer to health information shared by BCS in posts and comments between 2007–2017. Most of the information shared were uncertainties regarding: I) nutrition & physical exercise recommendations; II) management of long-term side effects of cancer treatment and comorbidities; III) management recurrence risk and psychological well-being; IV) treatment plans & health surveillance during survivorship; V) management of body image changes; VI) non-conventional therapies benefits & risks; VII) news about research on cancer. Less shared information regards to: I) return to work & social protection; II) general healthcare recommendations; III) community support to cancer patients; IV) genetics & heredity; V) sexuality; VI) infertility/fertility after breast cancer.

Conclusions
BCS use personal blogs to share difficulties, uncertainties and to search for information support to manage their health condition. Having access to useful information and education may help BCS manage uncertainty in illness, improve health literacy and self-efficacy to manage health condition. This study alerts health professionals to pay attention to BCS information and emotional needs.

References
Keywords
Breast cancer survivors, Blogs, Health information needs, Content analysis.

O78
Visual images spectrum android classification for diabetic foot ulcers
Ricardo Vardasca1, Rita Frade2,3, Rui Carvalho4, Joaquim Mendes2,3 1Faculdade de Engenharia, Universidade do Porto, 4200-465 Porto, Portugal; 2Porto Biomechanics Laboratory, Faculdade de Engenharia, Universidade do Porto, 4200-465 Porto, Portugal; 3Instituto de Ciência e Inovação em Engenharia Mecânica e Engenharia Industrial - Laboratório Associado de Energia, Transportes e Aeronáutica, 4200-465 Porto, Portugal; 4Clínica Multidisciplinar do Pé Diabético, Centro Hospitalar do Porto, 4099-001 Porto, Portugal
Correspondence: Ricardo Vardasca (ricardo.vardasca@fe.up.pt)
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Background
According to the Portuguese Society of Diabetology, about 415 million (88%) of the worldwide population was diagnosed with Diabetes Mellitus in 2015. Being the Portuguese population incidence of 1 million people (13.3% of the total population), with a national annual total estimated cost of 1.7 billion euros with this condition. One in each four patients of DM develop Diabetic Foot Ulcer (DFU) in their lifetime, ending some in amputations and consequently in death [1]. Furthermore, the Directorate-General of Health estimated that in 2016, the prevalence of DFU was of 11.5% in the Portuguese population [2]. Throughout the years, DFU assessment tools have been created, such as: I) scales, which depend on visual examination being highly subjective; II) invasive methods that use manual procedures for depicting the shape, area, depth and volume of wounds, that are time consuming, susceptible to human errors and can lead to wound contamination [3]; or III) non-invasive methods such as optical based techniques which provide three-dimensional information about the lesion, which are expensive, time consuming and require user training [4]. Therefore, more objective measures are required.

Objective
This research study aims to create an objective and simple methodology based in a mobile application which incorporates an algorithm that characterises DFU ulcers providing information about its area and tissue color composition.

Methods
An Android mobile application was developed, tested and evaluated in 200 diabetic foot ulcers, after signing the informed consent and the procedure being explained to patients. The study was approved by the ethical committee of Centro Hospitalar do Porto.

Results & Conclusions
The use of this new android mobile app showed a high correlation with the traditional clinical assessment ($r^2 = 0.97$), reducing subjectivity, avoiding wound contamination probability and smaller costs when compared to conventional solutions.

Acknowledgements
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References

Keywords
Android, Classification, Diabetic foot ulcers, Imaging, Wound assessment.

O79
Sleep disorders in elderly: is it a problem?
Vitor Moreira1, Ângela Mota1, Bárbara Santos1, Oliveira R Pereira1,2, Xavier Costa1,2
1Departamento de Tecnologias de Diagnóstico Terapêutica, Escola Superior de Saúde, Instituto Politécnico de Bragança, 5300-121 Bragança, Portugal; 2Clínica Multidisciplinar do Pé Diabético, Centro Hospitalar de Bragança, 5300-253 Bragança, Portugal; 3Centro Hospitalar de Trás-os-Montes e Alto Douro, Unidade Hospitalar de Chaves, 5400-279 Chaves, Portugal
Correspondence: Oliveira R Pereira (oliviapereira@ipb.pt)
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Background
Sleep disorders are one of the most relevant clinical symptoms in adults, with increasing prevalence throughout life, reaching in large scale the elderly population.

Objective
The present study aimed to characterize sleep disorders in the elderly and its pharmacological therapy.

Methods
A cross-sectional study was performed through application of a questionnaire to 381 elderlies in pharmacies of Braga, Bragança and Porto cities. Descriptive statistics were used, as well as univariate and multivariate statistical analysis, with a significance level of 5%.

Results
Elders were most from female gender (60.1%), aged between 65 and 74 years (49.6%) and lived in rural areas (73.4%). Just 36.5% of the elderly practice physical exercise and its pharmacological therapy, 41.7% take medication for sleep stopping the pharmacological therapy, 41.7% take medication for sleep disorders, 9% take medication without consulting a doctor, while 3.2% elderly people take medication after consulting a doctor. From the surveyed elderly have been diagnosed with sleep disorders, mainly insomnia (19.7%) following by restless legs syndrome (3.4%), excessive drowsiness (2.9%) and sleep apnoea, sleep-walking and narcolepsy (about 1%). It is important to refer that among the elderly, that assume to suffer from sleep disorders, just 40.7% have been consulted by a physician. Of those who consulted a doctor, 21.3% of the elderly were advised to change their lifestyle habits, such as, to avoid heavy meals before bedtime, to establish a sleep routine, to lie down only when he/she is sleepy and to practice physical activity. Concerning the pharmacological therapy, 41.7% take medication for sleep disorders, 9% take medication without consulting a doctor, while 32.5% elderly people take medication after consulting a doctor. From
Methods

community-dwelling elderly for planning health care and the implications to multidisciplinary clinical practice. To evaluate functional physical and mental abilities of old people is crucial for the planning of interventions by the health technicians. The objective of the present study is to assess the adherence to therapy in elderly institutionalized during the day and investigate the main factors that influence it.

Objective

To evaluate functional physical and mental abilities of community-dwelling elderly for planning health care and the implementation of services.

Methods

Quantitative descriptive-correlational study of the project “The oldest old: Coimbra’s ageing study” PTDC/CS-SOC/114895/2009 [1]. Sample constituted by 202 elders from a population of 808 (three age groups: 65-74; 75-84 and ≥ 85 years old), obtained in a randomized and probabilistic trial, from the files of users of a Health Centre, after ethic commission approval. As instrument and method of data collection was used the QAFMI (Portuguese version of the Older Americans Resources and Services), to evaluate the functional status, in terms of physical and mental health. Data analysis: a) descriptive analyses on the most common pathologies, their limitation and medication consumption; b) functional evaluation using the score given by the computer software based on the model of QAFMI.

Results

As main results we point out, the pathologies with major interference in physical activities, which are chronic bronchitis, skin disease, arthritis or rheumatism, effects of stroke and circulation troubles. Related to the consumption of medication, it was observed that for the most cited pathologies (hypertension and cardiac problems) there is a great percentage of consumption. Others (arthritis or rheumatism) have a lower prescription. There was no statistically significant difference for physical health, in the comparative study between genders. There are differences between the age groups, with lower scores for the oldest. Related to mental functional abilities, there is a statistically significant difference for the diverse age groups, with an increase of impaired capacity for the oldest. For the whole of the sample gender differences exist, being worst scored the women.

Conclusions

Women and the oldest, in general, appear as the ones that present lower functional physical abilities. The classification by the QAFMI model, regarding the area of mental health, reports the approach of cognitive decline and perception of memory loss. Like in other studies, differences were found between genders, resulting in worse scores for women.

References


Keywords

Elderly, Community-dwelling, Functional assessment, Physical health, Mental health.
Background
Oesophageal cancer (EC) and bladder cancer (BC) share the same embryonic origin (endoderm) and according to the latest numbers, EC is the eighth and BC is the ninth most frequently diagnosed cancers worldwide. Radiotherapy (RT) is currently used in the treatment of both types of cancer [1–4].

Objective
Assessment of the effects of ionizing radiation (IR) on cell lines of EC (OE19) and of BC (HT1376), namely viability and cell proliferation, characterisation of cellular death type and cell cycle, as well as to establish survival factor and determination of the aggression model, after different radiation dose exposure to calculate half lethal dose (DL50).

Methods
Cell lines were cultured and exposed to single-shot doses of X-rays from 0.5 Gy to 12.0 Gy, except control cells (0.0 Gy). Cell viability and proliferation were assessed by trypan blue assay. The proliferation index determination was performed by immunocytochemistry trough Ki-67 determination was performed by immunocytochemistry trough Ki-67

Conclusions
The direct effects of the DNA molecule that are unrepairable, activate multiple intracellular mechanisms on radio-sensitivity, such as cell death, namely by apoptosis and necrosis and cell cycle arresting G2/M phase. The increase radiation dose induces alterations in cell death, from apoptosis to necrosis. According to our results, OE19 is more radio-sensible than HT1376 cell line. This study demonstrates that molecular mechanisms underlying RT are important in oesophageal adenocarcinoma and bladder cancer therapeutic approaches.

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References

Keywords
Oesophageal cancer, Urinary Bladder Neoplasms, Radiotherapy, Ki-67 antigen.

O83 Sociodemographic characteristics and breastfeeding duration
Rita MF Leal1, Amâncio AS Carvalho2, Marília S Rua1
1School of Health, University of Aveiro, 3810-193 Aveiro, Portugal; 2School of Health, University of Trás-os-Montes e Alto Douro, 5000-801 Vila Real, Portugal
Correspondence: Rita MF Leal (ratanari@feiraleal@gmail.com)

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Background
Sociodemographic characteristics have been related to breastfeeding (BF) duration. Research has shown interest in these factors which may even be predictive [1].

Objective
To analyse a correlation between sociodemographic characteristics (maternal age, level of education, marital status, number of older children, child gender, child's year of birth) and breastfeeding (BF) duration.

Methods
An observational, descriptive-correlational and cross-sectional study was conducted. The population comprised mothers who had a biological child in 2012 and 2013 in the Centre region of Portugal. A non-probabilistic sample (n = 427) was collected using an online questionnaire with snowball effect. Data was analysed using SPSS software.

Results
Maternal age, marital status, child's gender and child's year of birth did not present a statistically significant relationship with BF duration. On
the other hand, mothers educational level (p = 0.001) and the number of older children (p = 0.018) presented a statistically significant relationship with BF duration.

Conclusions

Our study did not establish a correlation between maternal age and BF duration which contradicts other findings [1–3] and can be explained by pregnancy and childbirth postponement nationwide [4]. In relation to mothers’ educational level, we verified a statistically significant relationship with BF duration, being that the mothers who obtained a higher level of education, breastfed longer [1,5–7]. As for marital status, we did not verify a statistically significant relationship with BF duration, which is in line with a recent Portuguese study [5] but differs from other international studies [2,3] that refer that married mothers breastfeed longer. This difference can be explained by cultural differences and by the paradigmatic change of the women’s role, concept of marriage, and a diversity of forms of family life (great increase in unmarried couples). We also verified an increasing tendency in BF duration with the increase of the number of older children [6,7], but it was not lowest in primiparous women which contradicts other findings [6,7]. This may be clarified, once again, by the sociodemographic changes in the last decade in Portugal that include population ageing, an increasing tendency for families with an only child [4] and the great investment in parenthood and child wellbeing. Health care professionals should consider that sociodemographic characteristics are in constant change and so is its relation to health. These findings help health professionals to identify who may be most vulnerable to early weaning and allows them to explore expectations and develop a care plan accordingly.

References


Keywords

Age, Breastfeeding, Education, Population characteristics, Population dynamics.

O84

Population analysis of cleft lip and/or palate patients treated in the Postgraduate Orthodontic Department of the Faculty of Medicine of the University of Coimbra

Ana Roseiro1, Inês Francisco1, Luisa Malo1, Francisco Vale2

Correspondence: Ana Roseiro (a-roseiro@hotmail.com)

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Background

Cleft lip and palate is one of the most common dentofacial congenital anomalies, affecting on average 1/700 new-borns. Although the aetiology of this condition is not fully understood, it seems to be related with both genetic and environmental factors. This type of malformation may occur isolated or it could be associated with a syndrome. When compared with the general population, cleft lip and palate patients present in a larger number, a series of dental anomalies in number, size and tooth shape.

Objective

Analyse in a population of cleft lip and/or palate patients a number of anatomical and sociodemographic characteristics.

Methods

The study included 60 patients referred to the Postgraduate Orthodontic Department of the Faculty of Medicine of Coimbra by the Children’s Hospital during the year of 2015. All data related to patients was obtained through a meticulous and thorough orthodontic exam (medical history, cast models, intra and extra oral pictures and radiographic exams).

Results

Of the 60 patients included in the study, 65% were of male gender. Patients with 11 years of age were the most prevalent ones (5-22 years of range). The most common anomaly was unilateral lip and palate cleft (63%). Maxillary endognathy was present in 75% of the cases. 74% of the patients presented at least one dental agenesis being the upper lateral incisor the more common one.

Conclusions

Cleft lip and palate is more frequent in male individuals and seems to be associated with conditions like maxillary endognathy and dental agenesis, with orthodontic treatment being required in these patients.

Keywords

Cleft lip and palate, Dental agenesis, Maxillary endognathy.

O85

Drug use in pregnant women of Mirandela, Macedo de Cavaleiros and Bragança

Ana Branco1, Ana Coutinho1, Ana Machado1, Bárbara Alves1, Miguel Nascimento1,2,3, Olivia R Pereira1

1Departamento de Tecnologias de Diagnóstico Terapêutica, Escola Superior de Saúde, Instituto Politécnico de Bragança, 5300-121 Bragança, Portugal; 2Serviços Farmacêuticos, Unidade Local de Saúde do Nordeste, 5301-852 Bragança, Portugal; 3Centro de Investigação de Montanha, Instituto Politécnico de Bragança, 5300-253 Bragança, Portugal

Correspondence: Olivia R Pereira (oliviapereira@ipb.pt)

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Background

The use of drugs during the gestational period is a subject of great concern, once the exposure of medicines may result in toxicities with possible irreversible lesions for the foetus. In fact, drugs in pregnancy have been restricted since the accident of thalidomide. In 1979 the U.S. Food and Drug Administration (FDA) adopted the classification of drugs as the risk associated with their use during pregnancy, these being classified into 5 classes (A, B, C, D and X).

Objective

The aim of the present study was to characterize the use of drug therapy in pregnant women of Mirandela, Macedo de Cavaleiros and Bragança regions.

Methods

A cross-sectional study was performed through application of a questionnaire to 134 pregnant women in the Northeast (Mirandela, Macedo de Cavaleiros and Bragança regions) during consultation in a health centre. Descriptive statistics were used, as well as univariate and multivariate statistical analysis, with a significance level of 5%.

Results

The sample comprised a total of 134 pregnant women from the Northeast area, mostly with ages between 21 and 30 years or between 31 and 40 years (56.7% and 35.8%, respectively), holding secondary or higher education (48.3% and 42.5%, respectively) and employment (67.2%). About half of the pregnant (47.8%) were in the 3rd quarter of pregnancy. 78.4% (105 women) of the pregnant had used drugs during the pregnancy, 64.4% after medical prescription, and 71.6% have acquired the medication at the pharmacy. In detail,
the medication most used was folic acid (64.2%, 86 of the pregnant women) which belongs to class A; paracetamol from class B (35.1%, n = 471); iodine (17.2%, n = 23) and iron (14.9%, n = 20), both belonging to class A. Less reported drugs have included metoclopramide (6.0%) and Vitamin D3 (6.0%), from Class C and Class D, respectively. It is important to refer that 12.7% of the women had a chronic disease and 2.2% had an acute disease during pregnancy. Diseases more reported were asthma and diabetes.

Conclusions
In the present study, the use of drugs in pregnancy was independent of the education level, chronic or acute disease, locality, marital status, employment status, gestational period and health centre. The drugs most used by pregnant women belong to class A (18.5%), class B (25.9%) and class C (33.3%) and the less used belong to class D and X. Supplements such as folic acid, iodine and iron and the analgesic paracetamol were the most reported.

Keywords
Pregnancy, Drug therapy, Risk, Disease.

O86 Knowledge representation about self-management of medication regime in Portuguese Nursing Information Systems
Inês Cruz, Fernanda Bastos, Filipe Pereira
Nursing School of Porto, 4200-072 Porto, Portugal
Correspondence: Inês Cruz (inescruz@esenf.pt)
BMC Health Services Research 2018, 18(Suppl 2):O86

Background
The use of a standardized language in nursing supports the nursing science and contributes to the management of the discipline’s own knowledge [1, 2]. Nurses can control, practice, and teach only what they can name. The documentation of care in Nursing Information Systems in Portugal is based on the international classification for nursing practice (ICNP®) [3].

Objective
The purpose of this study is to describe and specify nursing diagnoses centred on the clients’ knowledge for self-managing the medication regime in chronic diseases.

Methods
Exploratory study. All nursing documentation, concerning all health centres and public hospitals, customized in the Portuguese nursing information System-SAPE® (2012) and in SClinico® (2016) was subject to content analysis. Content analysis of nursing documentation was based on ICNP® terminology. After conducting content analysis, the material was validated by a group of 14 nursing experts.

Results
A set of nursing diagnoses related to the person’s knowledge on the medication regime management were specified. Knowledge refers to the development of the client’s informational content about how to manage his medication regime. These diagnoses focus on the potential to improve knowledge about: self-management of the medication regime; medication regime; response to medication and side effects of medication; health services; complications and preventing complications of compromised self-management; and the use of devices to facilitate drug intake.

Conclusions
The specified diagnoses reflect nursing care needs that nurses document in the Portuguese nursing information systems, related to medication self-management. These results are contributions to the formalization of nursing science’s knowledge in the field of self-care of people living with chronic diseases.

References

Keywords
Self-management, Knowledge, Nursing Diagnoses, Nursing Information Systems.

O87 Illness perceptions, beliefs about medicines and medication adherence in hypertension
Teresa Guimarães, André Coelho, Anabela Graça, Ana R Fonseca, Ana M Silva
Escola Superior de Tecnologia da Saúde de Lisboa, Instituto Politécnico de Lisboa, 1900-096 Lisboa, Portugal
Correspondence: Teresa Guimarães (tguimaraes@estel.ipl.pt)
BMC Health Services Research 2018, 18(Suppl 2):O87

Background
Hypertension constitutes the most prevalent modifiable cardiovascular risk factor and a major risk factor for cognitive decline and dementia. Anti-hypertensive medication is essential to minimize the consequences of the disease, stressing the need for a high adherence to treatment to achieve hypertension control. Illness perceptions and beliefs about medication have been identified as important determinants of treatment adherence.

Objective
To identify patients’ perceptions on hypertension and beliefs about antihypertensive medication and assess associations between these beliefs and medication adherence.

Methods
63 hypertensive patients, 69.8% females, 54-95 years (M = 69.02; SD=10.07), 96.8% diagnosed for more than one year and with antihypertensive medication prescribed completed the Revised Illness Perception Questionnaire (IPQ-R), the Beliefs about Medicines Questionnaire (BMQ-Specific) and a medication adherence measure (Medida de Adesão aos Tratamentos – MAT).

Results
Most of the patients perceived hypertension as a chronic (100%), cyclical (96.8%) condition, which can be controlled by medication (96.8%) and behaviour (90.5%), presented strong beliefs in the necessity of medication (96.8%), but also strong concerns about the consequences of taking it (87.3%). Patients reported a high level of adherence to medication (M = 5.41; SD = 0.55 on MAT, 7 as highest possible score) and low frequency of non-adherent behaviours. Significant positive correlations were found between necessity scale (BMQ) and hypertension timeline (acute/cyclical) (rs(63)= 0.34; p < 0.01), treatment control (rs(63)= 0.43; p < 0.01), emotional representations (rs(63)= 0.50; p < 0.01) and between concerns scale (BMQ) and hypertension consequences (rs(63)= 0.26; p < 0.05); timeline (cyclical) (rs(63)= 0.46; p < 0.01), emotional representations (rs(63)= 0.32; p < 0.05). Significant negative correlations were found between concerns scale and personal (rs(63)= - 0.35; p < 0.01) and treatment (rs(63)= - 0.28; p < 0.05) control. We also found significant negative correlations between adherence (MAT) and hypertension timeline (cyclical) (rs(63)= -0.27; p < 0.05), consequences (rs(63)= -0.50; p < 0.01) and emotional representations (rs(62)= -0.37; p < 0.01).

Conclusions
Our findings suggest that illness perceptions play a key role in the way patients cope with their illness, through the development of patient’s beliefs concerning the necessity of medication and concerns about taking it, and also by directly influencing adherence to treatment. In our study, non-adherence is essentially unintentional (patients forget or are careless about treatment), what explains the lack of association between adherence and beliefs about medication, although we have found that, for the majority of subjects, concerns about taking medicines are outweighed by a belief in the necessity of the prescribed medication.
Keywords
Hypertension, Illness perceptions, Beliefs about medicines, Medication adherence.

O88 Self-determined motivation and life satisfaction of elderly for the supervised physical activity practice
Marco Batista¹, João Martinho¹, Jorge Santos¹, Helena Mesquita¹, Pedro Duarte-Mendes², Rui Paulo²
¹Polytechnic Institute of Castelo Branco, 6000-084 Castelo Branco, Portugal; ²Sport, Health and Exercise Research Unit, Polytechnic Institute of Castelo Branco, 6000-084 Castelo Branco, Portugal
Correspondence: Marco Batista (marco.batista@ipcb.pt)
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Background
The self-determination theory suggests that humans have several basic psychological needs that are innate, universal and essential to health and well-being, namely, autonomy, competence and relation perception. The wellness construct, measured by satisfaction with life is understood as a judgment process in which individuals generally estimate the quality of their lives based on their own criteria.

Objective
This study has as main objective to identify the motivations, basic psychological needs and satisfaction with the life of the Portuguese elderly for the practice of supervised Physical Activity; and to analyse the relations and comparisons between levels of practice, sex and institutional context.

Methods
A cross-sectional study was carried out with 62 elderly volunteers of both sexes (15 males and 47 females), institutionalized and non-institutionalized, belonging to the Municipality of Castelo Branco, with a mean age of 79.61 ± 9.34 years. The instruments used were the Behavioural Regulation in Exercise Questionnaire, the Basic Psychological Needs Scale Exercise and the Satisfaction with Life Scale.

Results
The results show that, apparently, the motivation that maintains the constant practice of physical activity supervised by the elderly focuses on the autonomous motivation. It can also be observed that, except for the amotivation, where women have higher levels of motivation for the practice of supervised physical activity than men, that is, they may be more exposed to an absence of motivational orientation, there are no differences at the level of the remaining motivational variables, as well as the basic psychological needs and life satisfaction between the male and the female. The results showed that, in the supervised elderly, the satisfaction of the basic psychological needs leads to autonomously motivated behaviours, promoting high levels of satisfaction with life.

Conclusions
We can conclude that autonomous motivation and the satisfaction perception of basic psychological needs are externalized as factors of great importance, because they appear to be a catalyst for this population to remain active and, in a way, to “compromise” with This lifestyle.

Keywords
Self-determination theory, Satisfaction with life, Exercise, Well-being, Elderly.

O89 Application of the transcontextual model of motivation in the prediction of healthy lifestyles of active adults
Marco Batista¹, Marta Leytón², Susana Lobato³, Maria Aspano³, Ruth Jimenez-Castuera³
¹Polytechnic Institute of Castelo Branco, 6000-084 Castelo Branco, Portugal; ²Universidad Pablo de Olavide, 41013 Sevilla, Spain; ³Universidad de Extremadura, 06071 Badajoz, Spain
Correspondence: Marco Batista (marco.batista@ipcb.pt)
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Background
The Transcontextual Model suggests an original contribution to knowledge, and can illustrate human behaviour, interpreting the theory of self-determination, contrasting with the hierarchical model of motivation, as well as with the theory of planned behaviour, seeking to predict behaviours. The strength of this model lies in the integration of different motivational theories, such that an explanation is a predicted complement to the motivational processes that are inexplicable in theory by each component.

Objective
The present study was designed with the objective of testing an extension of the Transcontextual Model of motivation in predicting healthy lifestyles of active adults.

Methods
The study sample consisted in 560 Portuguese active adults of both genders, aged between 30 and 64 years (M = 44.86; DP = 7.14). The instruments used were the Behavioural Regulation in Exercise Questionnaire, the Basic Psychological Needs Scale Exercise, Questionnaire for Planned Behaviour and the Healthy Lifestyle Questionnaire. A structural equation model was elaborated with which the predictive relations between the analysed variables were examined. The indices obtained in the measurement model were: $\chi^2 = 527.193$, $p < .001$; $\chi^2/df = 3.46$; CFI = .94; IFI = .94; TLI = .93; GFI = .93; RMSEA = .06; SRMR = .03. The model goodness test showed the following adjustment indices: $\chi^2 = 728.052$, $p < .001$, $\chi^2/df = 4.79$; CFI = .91; IFI = .91; TLI = .90; GFI = .91; RMSEA = .075; SRMR = .070.

Results
The structural equations model showed that the perception of social relation positively and significantly predicts autonomous motivation. In turn, this positively and significantly predicts control perception, predicting this, positively and significantly, the intentions. Eating habits and rest habits were positively and significantly predicted by intentions, and tobacco consumption was predicted negatively and significantly by intentions.

Conclusions
From the conclusions reached in this study, it is important to emphasize the importance of fostering social relations, since this will favour autonomous motivation, promoting a greater behavioural control over the intentions of the practitioners, thus generating more healthy eating habits, rest habits and lower consumption of tobacco.

Keywords
Theory of planned behavior, Self-determination theory, Structural equations models, Exercise, Lifestyles.

O90 Symptoms management and adherence to antiretroviral medication - a nursing intervention
Eunice Henriques, Maria FM Gaspar
Escola Superior de Enfermagem de Lisboa, 1600-190 Lisboa, Portugal
Correspondence: Eunice Henriques (eunice.henriques@esel.pt)
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Background
The increase of new diagnoses of HIV infection in young males, especially those who have sex with men, and the high percentage of late diagnoses, particularly in middle-aged heterosexuals continues to be our major concerns. As AIDS is now considered a chronic disease, its effective and sustainable treatment relies naturally on self-management of symptoms as well as promoting adherence to therapy. This will reduce costs and promote well-being in the person’s life.

Objective
To develop a nursing intervention program to enhance effectiveness in managing symptoms and consequently adherence to antiretroviral therapy in the person with HIV/AIDS. Specific Objectives: Validate and adapt the following instruments: “Revised Sign and Symptom checklist for Persons with HIV disease”; “Self-care symptom management for people living with HIV/AIDS; AACTG (Adult Aids Trial Group) Instruments; “HIV/AIDS Stigma Instrument - PLWA (HASI-P)”; I to
assess the frequency and intensity of the most common signs and symptoms associated with HIV infection among participants, as well as the strategies used; II) to evaluate the adherence to antiretroviral therapy (ART); and III) evaluate self-perception of stigma.

Methods
This is a quasi-experimental, study with pre and post intervention evaluation. Participants were selected at the HCC Day Hospital; HIV-infected, multi-stage, more than 18-year-old, to have ART for at least 6 months. We carried out the sociodemographic characterization and validation of the instruments. The intervention consisted in the application of a strategy manual for self-management of the most frequent symptoms.

Results
The 1st Study sample consisted of 374 individuals, 74.1% were males. The age varied from 20 years to 78. The average with 47.34 years. Of the 64 presented symptoms, the number of symptoms ranged from 0 to 53 by the same participant. The mean was 18.96 symptoms per person. The most frequent symptoms were: anxiety, fatigue, fear and worries and depression. Most do not use strategies, or they are not effective in managing these symptoms. Of the total number of respondents, 30% never stopped taking the medication and the same number failed to take the therapy in the last 3 months, the main reason is simple forgetting.

Conclusions
Most participants do not adequately manage the symptoms due to lack of knowledge of the appropriate strategies, indicating devaluation based on the belief of ineffectiveness (pain). Most say they adhere to ART (70%), making more than 95% of the shots, which is not always consistent with viral load.

Keywords
Nursing intervention, Symptoms management, Adherence to antiretroviral medication.

O91
Aortic valve prosthesis: cardiovascular complications due to surgical implantation
Virginia Fonseca1, Ana Rita Bento1, Joana Esteves1, Adelaide Almeida1,2, João Lobato1
1Escola Superior de Tecnologia da Saúde de Lisboa, 1990-094 Lisboa, Portugal; 2Hospital da Luz, 1500-650 Lisboa, Portugal
Correspondence: Virginia Fonseca (virginia.fonseca@estesl.ipl.pt)
BMC Health Services Research 2018, 18(Suppl 2):O91

Background
Aortic stenosis represents the third most common cause of cardiovascular disease, with indication for surgical valve replacement with a biological or mechanical prosthesis in most symptomatic patients. Biological prostheses present a higher risk of reoperation due to valvular degeneration; however, do not require prolonged therapy. In spite of the long durability, mechanics prosthesis need chronic anti-coagulant therapy. The surgical intervention for valvular replacement is not free of complications and can be grouped into three main categories: prosthesis complications, non-prosthesis related cardiac complications and non-cardiac complications.

Objective
To characterize the cardiovascular complications resulting from the implantation of biological or mechanical aortic valve prosthesis, by surgical procedure.

Methods
32 patients were evaluated in four follow-up moments. Cardiovascular complications resulting from the implantation of a valve prosthesis (biological or mechanical) were analysed, and also the value of the pre and post-surgical mean gradient, symptoms and cardiovascular risk factors. All the variables under study were characterized by descriptive statistics, except the mean gradient variable, for which the Friedman test was used.

Results
The most frequent complication detected in individuals who implanted biological aortic prosthesis in the first (18.75%), second (21.88%), third (21.88%) and fourth (9.38%) follow-up moments were arrhythmias and electrical conduction disturbances. There is a higher prevalence of Ativoventricular Block and Left Bundle Branch Block, in the first and second follow up moments that reverts in the last two. The complication with higher prevalence in the sample of individuals with mechanical prosthesis at the first (9.38%) and second (3.13%) follow-up moments were arrhythmias. At the third and fourth follow-up moments, the main complication was paravalvular leaks (9.38%). Statistically significant differences were detected in the mean gradient throughout the follow-up ($\chi^2(4) = 12.122, p = 0.016$).

Conclusions
The most frequent complications in individuals with aortic prosthesis were arrhythmias and paravalvular leaks. The structural deterioration of the biological valve prosthesis is the most commonly described complication, which may result in insufficiency of the valvular prosthesis and paravalvular leaks. However, electrical conduction disturbances after aortic valve replacement may occur through tissue manipulation of the conduction system. These disorders may be transient; however, certain patients require pacemaker implantation in the post-surgical period.

Keywords
Prosthetic valves, Aortic prosthesis complications, Biological prosthesis, Mechanical prosthesis.
“Risk and occurrence of adverse events on patients” (Results-Patients), 25% of the variance “Results-Nurses” and 100% of variance “Results-Organization”.

Conclusions
The Safe Staff Nursing Model clearly identifies the influence of SSN on the results obtained for patients, nurses and organizations. Warnings are given for the need to give more attention to issues of SSN, in particular to the constitution of balanced teams, based on a mix that includes number and competencies of nurses, versus workload/patients nursing care needs, as a strategy for maximizing resources and promoting the sustainability of organizations.

References

Keywords
Health care allocation resources, Nursing human resources, Safe nursing supplies, Safe Staff Nursing.

O94
The influence of an eight month multicomponent training program in elders lies gait and bone mineral mass
António M Moncto1,2, Filipe Rodrigues1,2, Pedro Forte1,2, Joana Carvalho1
1Department of Sports Sciences, Polytechnic Institute of Bragança, 5300-253 Bragança, Portugal; 2Research Center in Sports Sciences, Health and Human Development, University of Trás-os-Montes and Alto Douro, 5001-801 Vila Real, Portugal; 3Department of Sports Sciences, University of Beira Interior, 6201-001 Covilhã, Portugal; 4Research Centre in Physical Activity, Health and Leisure, Faculty of Sport, University of Porto, 4200-450 Porto, Portugal
Correspondence: Filipe Rodrigues (pfiliperodrigues@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O94

Background
Aging induces neuromuscular changes and mass, strength, muscular resistance and power, motor coordination, so, reaction and movement speed reduction may be compromised [1]. These changes result in slower movements and functional limitations in gait and weight transfer activities [1]. Even more, the functional fitness decreasing due to aging, increases the risk of falls and bone fractures [2], reducing the elderly’s quality of life.

Objective
Thus, the aim of this study was to assess the influence of an eight months multicomponent training program in elderly’s gait and bone mineral mass (BMM).

Methods
Forty-nine elderslies were recruited for this research with 64.39 (± 6.33) years old, 11 males with 67.45 (± 4.93) and 38 females with 63.50 (± 7.47) years old. The subjects were community living persons of Bragança. All procedures carried out in this research were in accordance to the Declaration of Helsinki. The multicomponent training program followed the Carvalho et al. [1], recommendations. Each session time volume was between 50 to 60 minutes. The sessions were divided in five parts: 1) general warm-up; 2) walking with aerobic exercises; 3) 1 to 3 sets of exercises of muscular resistance with 12 to 15 repetitions; 4) Static and dynamic balance training; 5) An active recovery period with stretching and breadcrumb exercises. The elderslies gait was evaluated with Berg Balance Scale (BBS) and BMM with bioimpedance (Tanita, BC-545). The Wilcoxon-Mann-Whitney test allowed to assess the differences between pre and post 8 months of the training program in BBS and BMM. The tests were performed with a significant level of 5%.

Results
The BBS values pre and post the multicomponent training program for BBS were 47.33 and 50.33 respectively. In BMM, the pre and post values were 2.36kg and 2.39 kg. Despite the differences in BMM means, they were not significant between the two moments (F = 1.253; p = 0.706). However, the same did not occur in terms of BMS values (F = 1.967; p< 0.001), where gait values increased significantly in the second moment.

Conclusions
Although the multicomponent training program did not increase the BMM in the elderly subjects, gait values increased significantly. Thus, it is possible to conclude that, the training program significantly improved the elderslies’ gait and quality of life.

References
Keywords
Elderly, Bone, Gait, Multicomponent, Training.

O95
Perception of virginity among Portuguese and Cape Verdeans university students – crossborder study
Sónia Ramalho1,2, Carolina Henriques1,2, Caceiro Elisa3, Maria L Santos1
1 School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2 Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
Correspondence: Sónia Ramalho (sonia.ramalho@ipleiria.pt)
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Background
Virginity can be defined as the attribute of a person who has never been subjected to any type of sexual intercourse. To be aware of the sexual behaviour and virginity of young people is fundamental that numerous construct health education intervention programs in this specific area.

Objective
To know the perception of Portuguese and Cape Verdean university students about virginity.

Methods
A descriptive, cross-sectional study using a questionnaire consisting of sociodemographic data and the perception scale on the loss of the virginity by Gouveia, Leal, Maroco and Cardoso (2010) [1]. A sample composed by 108 young people from the Republic of Cape Verde and 141 young Portuguese participated in the study. All formal and ethical procedures were taken into account.

Results
Young Portuguese university students presented a mean age of 20 years and 73% of the young people reported having started their sexual life at 17.00 years old, on average. The majority of the young people (66.7%) started their sexual activity with their boyfriends, using protection/contraception (70.9%). Young college students from Cape Verde had a mean age of 21.26 years, 69.4% reported having started their sexual life, on average, at 17.37 years. The majority (63.0%) started their sexual activity with their boyfriend, using protection/contraception (62.0%). Portuguese young people showed high levels of agreement with the ideal associated with the genital vision of loss of virginity (Md = 18.95, Xmax = 25.00, X min = 11.00), while Cape Verdean students had lower levels of agreement (Md = 12.34, Xmax = 24.00, X min = 5.00), showing in 41.7% of the cases, disagreement that ‘a lesbian woman, who has never had sex with a man, is virgin and a 38.0% disagreement with the statement that men who only practice oral sex, or anal sex or other forms of sex, do not lose their virginity’.

Conclusions
The study shows that there is still considerable lack of knowledge in young people about the conceptualization of virginity and a very genitalized view of it in the Portuguese young people, in lower agreement with the perception of young Cape Verdeans.

Reference

Keywords
Young, Sexuality, Virginity, Portugal, Cape Verde

O96
Influence of a specific exercise program in the institutionalized elderly balance
Cátia Guimarães1, Margarida Ferreira1, Paula C Santos3, Mariana Saavedra2
1 Institute of Research and Advanced Training in Health, Sciences and Technologies, Cooperativa de Ensino Superior Politécnico e Universitário, 4585-116 Gandã, Portugal; 2 Hospital da Senhora da Oliveira, 4835-044 Guimarães, Portugal; 3 Department of Physical Therapy, School of Health, Polytechnic Institute of Porto, 4400-330 Vila Nova de Gaia, Portugal
Correspondence: Margarida Ferreira (margasufer@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O96

Objective
To determinate the effectiveness of a specific exercise program on balance and functional capacity of the daily activities of institutionalized elder.

Methods
A randomized controlled trial. A total of 21 elder were selected from the Santa Casa da Misericórdia de Santo Tirso and randomly distributed into experimental (n = 11) and control groups (n=10). The experimental group performed a specific program of exercises (resistance training, balance, coordination and flexibility) during 4 weeks, while the control group wasn’t subjected to any intervention. The primary outcome was balance, as measured with a Performance Oriented Mobility Assessment scale (POMA), and the secondary outcome measure included functional capacity based on the Timed Up & Go test. Evaluations were carried out at the beginning and end of the exercise program, for both groups. The data were analysed with Statistical Package for Social Sciences, version 22.0, for all test procedures, a probability of p< 0.05 was considered to be statistically significant. Statistical analyses of POMA and TUG were performed with use of independent and paired t-test. POMA and TUG score association were analysed via the Pearson correlation, after the intervention.

Results
In the pre-intervention, groups were homogeneous (p < 0.05). After intervention, there were no statistically significant differences between groups in terms of the total balance and dynamic balance subscale, except static balance subscale (p < 0.048). In the functional capacity test, the experimental group reduced significantly the functional activity time into intragroup (p < 0.001), however there were no significant differences between groups (p < 0.063). After intervention, the experimental group had a significantly strong negative association (p < 0.001).

Conclusions
The results of this study demonstrated that this specific exercise program was not effective in terms of the total balance and functional ability of institutionalized elderly.

Trial Registration
NCT033521752

Keywords
Balance, Institutionalized elderly people, Therapeutic exercise, Functional capacity.

O97
Assessment of pain and effectiveness of analgesia in patient undergoing haemodialysis
Luís Sousa1,*, Cristina Marques-Vieira1, Sandy Severino1,4, Cristina Firmino2, Ana V Antunes2, Helena José3
1 Hospital Curry Cabral, Centro Hospitalar Lisboa Central, 1069-166 Lisboa, Portugal; 2 Escola Superior de Saúde Atlântica, 2730-036 Barcarena, Portugal; 3 Escola de Enfermagem de Lisboa, Instituto de Ciências da Saúde, Universidade Católica Portuguesa, 1649-023 Lisboa, Portugal; 4 Agrupamento de Centros de Saúde Loures-Odivelas, Administração Regional de Saúde de Lisboa e Vale do Tejo, 2685-101 Sacavém, Portugal
Correspondence: Luís Sousa (luismsousa@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O97

Background
Pain is the most common symptom in patient’s undergoing haemodialysis, due to comorbidity, although it is frequently underdiagnosed [1-2]. Pain in these patients is not valued in its entirety and does not consider the limitations resulting in their quality of life [3]. The Brief Pain Inventory short form (SF-BPI) is the most widely used instrument and has the most number of foreign language translations [4].
Objective
To evaluate the prevalence of chronic pain, and intradialytic pain in patient undergoing haemodialysis, as well as the effectiveness of analgesic therapy.

Methods
Cross-sectional, descriptive and observational study. A random sample consisting of 172 patients undergoing haemodialysis in two clinics in the region of Lisbon, Portugal. The Brief Pain Inventory, which analyses the influence of pain in a patient’s life, was only applied to evaluate chronic pain [5]. The Visual Analogue Scale was used to assess the intradialytic pain. Tests were administered during dialysis sessions from May to June 2015. Categorical variables were expressed as percentages and continuous variables were expressed as mean standard deviations or medians. This study was approved by the Ethics Committee of Diaverum (N 1/2015).

Results
The sample consisted mostly of men (61.6%) of Portuguese nationality (80.7%), the mean age was 60 years (± 14.4), and patients were under haemodialysis treatment for 7.26 months (± 5.4). Chronic pain occurs in 54.1% of patients and intradialytic pain in 75%. The causes of pain were musculoskeletal (69.3%), associated to vascular access (19.3%) and other causes (11.4%). Chronic pain was most commonly located in the legs (43.2%), followed by back (21.6%) and vascular access (19.3%), head (8%), arms (4.5%), abdomen (2.3%) and, lastly, chest (1%). The percentage of patients that took analgesics for chronic pain was much higher (62.0%) of these 87.8% are non-opiates, 10.2% weak opiates and 2% strong opiates. The other therapeutic interventions referred were: rest (24.1%), massage and relaxation (6.3%), cryotherapy (1%), exercise (1.3%), while 5.1% reported doing nothing. The effectiveness of the treatment was successful for chronic pain, in 62.6% of the patients, there was a relief felt of over 50%.

Conclusions
Pain of musculoskeletal origin is a frequent symptom in our sample. The pharmacological management of chronic pain is the most applied intervention.

References

Keywords
Renal Insufficiency, Chronic, Renal Dialysis, Quality of Life, Pain.
Background
Proper eating habits are crucial to a healthy life. It is important to understand the determinants of eating choices made at adolescence because this stage of life is paramount for the formation of lifelong enduring habits.

Objective
To identify determinants of eating choices based on adolescents’ perception and characterizing them, in particular, to the level of relevance attributed by adolescents.

Methods
A cross-sectional study was carried out, based on a sample of 358 adolescents (14-18 years old) from two schools of Coimbra. First, a quantitative study was carried out using the scales: EHA (eating habits scale), TAA-25 (eating attitudes test) and GSQ (general self-efficacy scale). In a second step, a qualitative study was carried out with subgroups that were selected from the results of the first phase of the study. These subgroups presented opposite patterns of habits (group A: better eating habits - EHA≤160 and group B: worst habits - EHA>160) and we moved into a grounded theory approach with semi-structured individual interviews.

Results
Gender emerges as a determinant of eating choices pattern, with girls assuming more adequate eating habits ($t = 3.84; p < .0001; r^2 = 0.037$). The perception of general self-efficacy as an influence is greater for boys, functioning as a protective factor that reduces unhealthy options. Through multinomial regression models, we could see that gender and general self-efficacy have a big influence on eating habits. The ideals of beauty have influence on this effect. Resisting adversity has an important influence in the choices, being associated to self-regulation. The situations of risk to develop an eating behaviour disturbance appear mainly in the cases of adolescents presenting better habits ($t = 3.54; p < .0001; OR = 4.04$). Through content analysis it was possible to identify determinant factors that were perceived by adolescents in both groups. The ones that were more often mentioned (in a decreasing order) were family influence, taste preferences, knowledge of healthy eating rules and availability. This was followed by determinants such as self-control capacity, feeling well or bad, peer influence, feeling hungry or full, developing a task or not, impulsiveness, time available and humour/stress.

Conclusions
The differences found between sexes can justify differentiated interventions. Our results also suggest the relevance to work on self-image. Family must be considered as an integrating part of the interventional in health education. Political measures taken by schools and government agents can also have a very important role in making healthy choices easier.

Keywords
Adolescents, Eating habits, Determinants.

O100
The influence of regular sports practice on motor skills and student’s physical fitness
Júlio Martins, João Cardoso, José Reis, Samuel Honório
1University of Beira Interior, 6201-001 Covilhã, Portugal; 2Research Center in Sports Sciences, Health Sciences and Human Development, 6201-001 Covilhã, Portugal; 3School of Education, Polytechnic Institute of Castelo Branco, 6000-266 Castelo Branco, Portugal
Correspondence: Samuel Honório (samuelhonorio@hotmail.com)
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Background
Sports practice develops several motor skills that help practitioners not only in game, but also brings benefits to their physical fitness. Practitioners develop an effective motor response and quick solutions to daily situations.

Objective
Determine if the regular practice of sports influences or not motor skills, physical fitness and body composition of students. We wish also to identify the correlation between the performance of students in specific motor skills tests of football, physical fitness and body composition.

Methods
The sample consisted in 160 (divided in two groups of 80) male students, 12-year-old, living in Madeira and that practice football regularly. One group of students had an extracurricular physical activity beyond curricular physical activity (Federated Sports), and the other group entails students who only practice physical activities as a curricular activity (School Sport). Body composition (BMI and %BF) were also evaluated by Fitnessgram. To evaluate motor abilities the software Predictive Analytics Software – PASW was applied.

Results
After analysing the results, we became aware that students with extracurricular physical activities had better results in motor skills than students with curricular physical activities. This result is perhaps the less surprising in the set of all assessments due to the longer physical commitment of these students in relation to the students that only exercise in the context of curricular activities. Regarding physical fitness, students with extracurricular physical activities achieve a relatively higher average than students with curricular physical activities. Regarding body composition and after determining the BMI and %BF of each group, it appears that students with extracurricular physical activities achieve better results than those achieved by the students of curricular physical activities.

Conclusions
The regular practice of sports with curricular and extracurricular physical activities, seems to contribute to an improvement of physical fitness, motor skills and body composition of students, keeping them in a healthy fitness zone, thus preventing premature cardiovascular diseases, among others.

Keywords
Motor Skills, Physical Fitness, Body Composition, Federated Sports, School Sports.

O101
Promotion of language skills in children aged 5-6 years, without language disorders
Tiago Rodrigues, Catarina Mangas
School of Education and Social Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
Correspondence: Tiago Rodrigues (tiagoca.rodrigues@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O101

Background
Language is a human faculty that enables communication with various interlocutors. This appears early and develops, exponentially, in the early years of life. For such, it is important that the surrounding environment is stimulating and allows the exchange of experiences with other speakers. The pre-school age is a milestone in the development, not only for stimulation, but also to identify deviant behaviours. In order to avoid future complications, professionals who deal with these children should prevent any language disorders. The speech and language therapist, being a health professional trained to deal with the areas of communication and language, has a prominent role in this preventive action. In Portugal, there aren’t many references concerning prevention in language disorders. As such, it is necessary to promote a definite change in the present scenario, namely with innovative and stimulating materials to develop language.

Objective
Therefore, this is an exploratory-descriptive study, with a qualitative-quantitative paradigm and the general objective of this study was to create and implement a Language Skills Promotion Program for 5-6
year-old children without any language disorders, in order to analyse their potential influence on their language skills”.

Methods
To this end, a 10-session program was build, evaluated and validated by a panel of experts. Before the beginning of the program, all the sample children were evaluated with a language test for preschool age. A sample of 12 children, divided equally in two groups, was selected and the program was applied by a Speech and Language Therapist only to one of these groups. At the same time, the Childhood Educator’s opinion was collected in order to understand the influence of the respective program on the children’s language skills.

Results
The final results of the study show that children who participated in the program improved their language skills, which was not the case of the children who did not take part in that same study. These results prove that the investment in prevention actions, through the promotion of language skills, enhances the oral and written language skills of children, especially in terms of literacy, something that is indispensable for their educational success.

Conclusions
Finally, the study also emphasizes the importance of primary prevention actions, such as the application and development of programs to stimulate or organize information actions, with a view to promoting actions, such as the application and development of programs to stimulate or organize information actions.

Keywords
Child language, Child-rearing, Early intervention, Prevention, Speech therapy.

O102
The impact of a training program on the performance of nurses working at a chemotherapy ward
Joana M Silva, Isabel M Moreira, Anabela Salgueiro-Oliveira
Nursing School of Coimbra, 3046-851 Coimbra, Portugal
Correspondence: Joana M Silva (joanamota19@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O102

Background
Oral mucositis (OM) is the major complication reported by patients undergoing chemotherapy and/or radiotherapy, with a strong impact on their quality of life by compromising physical and psychological functions [1]. OM affects 40-76% of patients undergoing chemotherapy and up to 90% of patients undergoing radiotherapy [3,4]. Inadequate oral hygiene is a patient-related risk factor in which health professionals can intervene [5,7], namely nurses [6]. Oral examination allows diagnosing the different stages of OM and establishing an individualized care plan.

Objective
To assess the impact of a training program on the performance of nurses working at a chemotherapy ward regarding OM risk assessment and prevention in cancer patients.

Methods
This action-research study aimed to identify nurses’ interventions in patients with or at risk for OM. Data were collected from the nursing records of 110 patients between October and November 2016 in order to analyse the nursing documentation pattern based on an evidence-based grid. Data were analysed using descriptive statistics. The discussion with the team nurses about the results obtained in the document analysis was used to design a three-session training program. The next step was to reanalyse the nursing documentation pattern with the purpose of identifying positive changes in the aspects under study. The study was approved by the Ethics Committee.

Results
The analysis of the documentation pattern showed that 31.8% of the patients were not asked about oral hygiene practices, although 25.7% of the sample patients were in the 1st cycle of chemotherapy. A total of 21.9% of patients were not observed during oral hygiene care. Only 14.5% of patients were given instructions about the treatment of side effects, and only 12.5% of them were given instructions about oral hygiene care. Only 2.7% of the patients had their oral cavity/mucous membranes examined, and all of them were diagnosed with OM. The implementation of the training program led to the introduction of standardized records for oral cavity surveillance. Nurses showed high adherence levels to this practice and considered it very relevant in clinical practice.

Conclusions
The research results show that nurses do not perform a systematic diagnostic evaluation of patients’ oral cavity and that few patients receive instruction on oral hygiene care, which does not contribute to patient empowerment in this area. The implementation of the training program showed that nurses recognize the need for and are committed to changing practices in this area.

References

Keywords
Oral mucositis, Nursing care, Oncology.

O103
Styles of conflict management and patient safety
Anabela Almeida¹, Sara Cabanas², Miguel C Branco²
¹Universidade de Beira Interior, 6200-001 Covilhã, Portugal; ²Centro Hospitalar Cova da Beira, 6200-251 Covilhã, Portugal
Correspondence: Anabela Almeida (aalmeida@ubi.pt)
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Background
Health is a demanding scenario of changes and successive adaptations that, very easily, allows the emergence of differences between the involved and conflicts between professionals. Ineffectively managed conflicts in health organizations reduce quality, compromise safety, and increase the costs of health care delivery, secondarily to the goals of being effective and efficient.

Objective
Thus, the general objective of the study is to investigate the relationship between the conflict management styles used and the level of patient safety climate among the clinical services professionals at Hospital Pêro da Covilhã of CHCB.

Methods
The research is of a quantitative nature, of a descriptive and correlational character and of a transverse nature. The sample is non-probabilistic, consisting of 137 health professionals who work at CHCB. The use of ROCH-II and SAQ allowed the evaluation of the styles of conflict management and the perceptions of attitudes of health professionals related to patient safety.
Results

The results show that professionals, in all relations with the opponent, opt preferentially for collaboration, with competition being the least common style of conflict management. There were no differences in the styles of conflict management used in relation to the opponent. The participants presented positive attitudes towards the patient’s safety, and it was verified that the professionals perceived a lower security relative to the dimension of management’s perception and greater in relation to the dimensions of job satisfaction and recognition of stress, which show the highest values. The relationship between conflict management styles and the security climate level was verified. There is an association between literacy and conflict management styles, and years of service and conflict management styles. Regarding the ordinal independent variables, all are associated with the perceptions of the security climate.

Conclusions

Gender, marital status, integration period, function and years of service, influence the conflict management styles used; and age, gender, choice of service, integration period, function, area of service and years of service, influence the perceptions of professionals’ attitudes related to patient safety.

Keywords

Conflict, Conflict management, Patient safety, Safety climate.

O104

Influence of a rehabilitation nursing care program on quality of life of the patients undergoing cardiac surgery

José Moreira, Jorge Bravo

Department of Sports and Health, School of Science and Technology, University of Évora, 7000 Évora, Portugal

Correspondence: José Moreira (jforwardmoreira@gmail.com)

BMC Health Services Research 2018, 18(Suppl 2):O104

Background

Cardiac rehabilitation (CR) is fundamental in the treatment of patients undergoing cardiac surgery (CS) regarding the educational, physical exercise and quality of life dimensions. Considering the competences of Specialist Nurses in Rehabilitation Nursing (SNRN) and the current widespread implementation of the programs, these interventions were performed during hospitalization, pre- and post-cardiac surgery, and 1 month after hospital discharge. In phase II, a physical exercise program was fulfilled according to the norms of the American College of Sports Medicine, comprising 3 sessions of physical exercise per week lasting between 30 to 60 minutes, including heating, aerobic exercise and recovery/stretching. The higher score in Stiffness and the lowest total score on the WOMAC were compared with age, gender, job, among others, influence this return.

Methods

Participants (n = 11) submitted to CS, of both sexes, between 25 and 64 years of age (61.09 ± 7.09 years), that according to the American Heart Association and the American Association of Cardiovascular and Pulmonary Rehabilitation, met the criteria for low or moderate risk, class B for participation and exercise supervision, absence of signs/symptoms after CS, with a left ventricular ejection fraction greater than 40%. Supervised interventions were performed during hospitalization, pre- and post-cardiac surgery, and 1 month after hospital discharge. In phase II, a physical exercise program was fulfilled according to the norms of the American College of Sports Medicine, comprising 3 sessions of physical exercise per week lasting between 30 to 60 minutes, including heating, aerobic exercise and recovery/stretching. Hemodynamic data (blood pressure, heart rate, peripheral oxygen saturation, pain) and the Borg scale were recorded in the initial, intermediate and final periods of each session. The aerobic capacity was evaluated through the 6-minute Walk Test and the health-related quality of life using the Short Form Health Survey 36 (SF-36V2) questionnaire.

Results

Significant statistical improvements were observed in the time/walk relationship, such as the increase in the respective functional capacity (p = 0.05) and quality of life (in various domains). During the hospitalization, the subjective perception of the effort of session to session decreased in 81.82% of the participants. T-test for independent samples revealed that differences in resting heart rate (phase I) were not significant, however, the difference in distances was significant at a 95% confidence level.

Conclusions

Nursing rehabilitation care is essential to improve the quality of life of patients undergoing CS in a phase I and II rehabilitation program. The benefits of CR programs are evident when initiated early after CS, reinforcing the need to increase their implementation in the rehabilitation of cardiovascular disease. Although the reduced sample size, the results represent a basis for future studies with a larger number of participants and a longer intervention period after CS.

Trial Registration

NCT03517605

Keywords

Cardiac Rehabilitation, Quality of Life, Rehabilitation Nursing.

O105

Study of knee arthroplasty in the elderly population with agricultural activity

Carla Costa, Ana P Martins

Faculdade de Ciências da Saúde, Universidade da Beira Interior, 6200-506 Covilhã, Portugal

Correspondence: Carla Costa (csofia_29@hotmail.com)

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Background

Arthritis is a major cause of pain, disability and loss of quality of life [1]. It affects the knee of elderly, overweight people and women frequently, and is influenced by articular overload, that occurs in Agriculture [2-9]. The majority of the individuals submitted to Total Knee Arthroplasty (TKA) refer significant decrease of knee pain and increase of knee functionality [1]. In this context, there are no studies on the recovery of elderly if they return to Agriculture after TKA.

Objective

Realize if elderly people between 65 and 80 years old, patients of Pêro da Covilhã Hospital, with Agricultural activity before surgery and submitted to TKA, with medial approach and posterior cruciate ligament sacrifice for the first time, can return to Agriculture and how long does it take; otherwise, identify the reasons for the interruption. Secondly, analyse if Body Mass Index (BMI), gender, job, among others, influence this return.

Methods

This is an observational retrospective study with 38 patients between 65 and 80 years old submitted to TKA. Data was collected through clinical processes and patients self-report Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) and analysed on SPSS and R software (statistically significant p < 0.05).

Results

Of the 38 patients, 76.3% were female. Average age was 72.21 ± 4.50 and 75.13 ± 5.01 years old at the time of TKA and at the time of the questionnaire, respectively. On both moments the majority of the individuals had overweight or obesity. 84.2% returned to Agriculture (81.2% partially and 18.8 % fully), on average 6.34 ± 4.90 months after TKA. The median age at the surgery of the seniors who didn’t return to Agriculture is superior to the one of the seniors who returned (p = 0.025). The higher score in Stiffness and the lowest total score on WOMAC was seen in the individuals who returned four or more months after TKA (p = 0.0125 and p = 0.026, respectively).

Conclusions

The majority of the individuals between 65 and 80 years old, with Agricultural activity before surgery and submitted to TKA with medial approach and posterior cruciate ligament sacrifice, can return to Agriculture, in 6 months. Most of them don’t return fully. The most cited reason was surgery consequences. The median age at the time of TKA of
the seniors who didn’t return is superior to the one of the seniors who returned. A worst score in Stiffness and a better Total score was seen in the seniors who took longer to return to Agriculture.

References

Keywords
Knee, Arthritis, Elderly, Agriculture, Arthroplasty.

O106
Teachers Acceptance and Action Questionnaire Portuguese version (TAAQ-PT): factor structure and psychometric characteristics
Ana Galhardo 1, Bruna Carvalho 1, Ilda Maisano-Cardoso 1, Marina Cunha 1
1Instituto Superior Miguel Torga, 3000-132 Coimbra, Portugal; 2Cognitive and Behavioural Center for Research and Intervention, University of Coimbra, 3001-802 Coimbra, Portugal; 3Faculty of Medicine, University of Coimbra, 3004-304 Coimbra, Portugal
Correspondence: Ana Galhardo (anagalhardo@ismt.pt)
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Background
Teaching has the potential to provide high satisfaction levels but it is described as a demanding profession with multiple sources of stress. Teachers’ psychological well-being is essential not only for themselves but also for students. Experiential avoidance of private events (e.g., thoughts, feelings, body sensations) has been pointed as a key construct linked to psychopathological symptoms. The Teachers Acceptance and Action Questionnaire (TAAQ) is a teacher-specific measure developed to target experiential avoidance related to the teaching activity.

Objective
The current study sought out to develop the Portuguese version of Teachers Acceptance and Action Questionnaire (TAAQ-PT), explore its factor structure and psychometric properties in a sample of Portuguese teachers teaching in the 1st, 2nd and 3rd basic cycles and secondary education.

Methods
A sample of 304 teachers, 256 women (84.2%) and 48 men (15.8%) was recruited through teachers’ professional associations. Participants completed online a sociodemographic and professional questionnaire and a set of self-report instruments: the TAAQ-PT, the Depression Anxiety and Stress Scale 21 (DASS – 21), the Utrecht Work Engagement Scale (UWES), and the Five Facet Mindfulness Questionnaire (FFMQ). TAAQ-PT confirmatory factor analysis was conducted and reliability and validity were estimated.

Results
The TAAQ-PT revealed a single factor structure. Correlated measurement errors were specified for items 5 and 7, 3 and 10, and 8 and 9 due to similar phrasing. The one factor model, which specified method effects between those items, fits the data well: χ²/gl = 1.55, CFI = .99, RMSEA = .043, MECVI = .321. The TAAQ-PT presented a Cronbach alpha of .91. Additionally, composite reliability (CR) was calculated, and a value of .95 was found. The TAAQ-PT presented significant negative correlations with mindfulness facets (r = -.60; p <.01), and work engagement (r = -.62, p <.01), and positive correlations with negative emotional symptoms of depression (r = .69; p <.01), anxiety (r = .63; p <.01) and stress (r = .70; p <.01).

Conclusions
Similar to the original version, confirmatory factor analysis revealed that the single-component model fits the data well. It showed good internal consistency, and correlations with other mental health measures suggested good convergent and discriminant validity. The TAAQ-PT was found to be a valid and reliable measure of experiential avoidance in teachers to be used in clinical and research contexts.

Keywords
Experiential avoidance, Teachers, Confirmatory factor analysis, Psychometric properties.

O107
Youth sports injuries according to health-related quality of life and parental instruction
Lara C Silva1,2, Júlia Teles2,3, Isabel Fragoso1,2
1Laboratory of Physiology and Biochemistry of Exercise, Faculty of Human Kinetics, University of Lisbon, 1499-002 Dafundo, Portugal; 2Interdisciplinary Center for the Study of Human Performance, Faculty of Human Kinetics, University of Lisbon, 1499-002 Dafundo, Portugal; 3Mathematics Unit, Faculty of Human Kinetics, University of Lisbon, 1499-002 Dafundo, Portugal
Correspondence: Lara C Silva (laras@ualantica.pt)
BMC Health Services Research 2018, 18(Suppl 2):O107

Background
Participation in physical activity involves a risk of injury that has a considerable public health impact [1]. Sports injuries are the major cause of morbidity among children and adolescents in developed countries [2]. They account for half of all injuries in school age children. The relationship between sports injuries, health-related quality of life (HRQoL) and parental instruction is still not clear.

Objective
Determine sports injuries biosocial predictors in Portuguese youth.

Methods
Information about HRQoL, parental instruction and sports injuries was assessed via three questionnaires; KIDSCREEN-52 [3,4]; RAPIIL II [5,6] and LESADO [1,7,8] respectively. They were filled by 651 subjects aged 10 to 18 years, attending four Portuguese community schools. Univariate analyses were used to verify significant differences between groups. Logistic, linear and multinomial regression analyses were used to determine significant biosocial predictors of injury, injury rate, injury type and body area injury location.

Results
Injury rate was higher in boys with lower scores in the school environment dimension of KIDSCREEN-52 (p = .022) and in girls was higher in those with lower scores in the moods and emotions dimension (p = .001) and higher scores in the self-perception dimension (p < .001). Also in girls, upper limbs injuries were associated with higher scores in the moods and emotions dimension, and the spine and torso with lower scores (p = .037). Lower limbs injuries were associated with lower parents’
education and upper limbs (p = .046) and spine and torso (p = .034) injuries with higher parents’ education.

Conclusions
Surprisingly given the large number of injuries resulting from participation in sports and the associated high costs of health care, very few investigations have been conducted into biosocial variables and their relation to sports injuries. Injuries in the Portuguese youth were linked to three dimensions of KIDSCREEN-52 (moods and emotions, self-perception and school environment) and parents education level. Sports injuries usually result from the combination of several risk factors interacting at a given time [9]. Understanding the role of social and environmental factors related to sports injuries is needed, as they can be a part of this complex equation.

Acknowledgements
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References

Keywords
Sports Injuries, Children and Adolescents, Health Related Quality of Life, Parental Instruction.

O108
The influence of moderate- to vigorous-intensity activity on the physical fitness of non-institutionalised elderly people
Fernanda Silva1, João Petrica1, João Serrano2, Rui Paulo3, André Ramalho1, José P Ferreira1, Pedro Duarte-Mendes1,3
1Department of Sports and Well-being, Polytechnic Institute of Castelo Branco, 6000-266 Castelo Branco, Portugal; 2Centro de Estudos em Educação, Tecnologias e Saúde, Instituto Politécnico de Viseu, 3504-510 Viseu, Portugal; 3Research on Education and Community Intervention, 4411-801 Arcozelo – Vila Nova de Gaia, Portugal; 4Research Unit for Sport and Physical Activity, University of Coimbra, 3040-248 Coimbra, Portugal

Correspondence: Fernanda Silva (f.m.a.s_298@hotmail.com)

Background
As a result of the ageing process, there is evidence of a decline in physical aptitude (strength, endurance, agility and flexibility) associated with a lower performance in the activities of daily living [1]. Physical activity plays therefore a key role in maintaining the health and physical fitness of the elderly [2]. The recommendations on physical activity for health suggest that the elderly should perform at least 30 minutes of moderate- to vigorous-intensity activity per day [3, 4].

Objective
The aim of this paper is to accurately quantify physical activity time in the elderly and to verify the existence of differences regarding physical fitness levels between two groups of people: those who complied and those who did not comply with the Global Recommendations on Physical Activity for Health [4].

Results
This cross-sectional study sample includes 36 elderly individuals (72.28 ± 6.58 years old), both male and female, divided into two groups: the group which has fulfilled the recommendations (N = 16; 53.76 ± 24.39 minutes) and the group that has not fulfilled the recommendations (N = 20; 15.95 ± 7.79 minutes). Physical activity was assessed for 3 consecutive days and 600 minutes of daily recording, at least. The ActiGraph® GT1M Accelerometer was hence used. The “Functional Fitness Test” battery (Rikli and Jones) was used to assess the physical and functional autonomy of the elderly [5]. In order to analyse data, descriptive and inferential statistics were used. The Shapiro-Wilk test was applied to assess normality, whereas the Mann-Whitney test and the t-Test were used for independent samples.

Conclusion
On average, participants spent more time in sedentary activities than in physical activity. This group which has fulfilled the recommendations on physical activity has achieved better results on almost all physical fitness tests: 30 s chair stand (repetitions), arm curl (repetitions), 6-minute walk test (m), 8-foot up-and-go (s). However, no significant difference was found between the groups.

Acknowledgements
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References

Keywords
Physical fitness, Elder, Physical activity, Recommendation.

O109
Effects of strength and conditioning programs in strength and dynamic balance in older adults
Rogério Salvador1,2, Luís Coelho1,2, Rui Matos1,2, João Cruz1,2, Ricardo Gonçalves1,2, Nuno Amarô1,2
1School of Education and Social Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2Institute of Health and Sport, Instituto Superior Técnico, University of Lisbon, Portugal
Correspondence: Rogério Salvador (rogerio.salvador@ipleiria.pt)
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Background
To independently accomplish their daily routines with no need of assistance, older adults require an optimal physical fitness. In fact, this lack of physical fitness may reduce older individuals’ quality of life, leading to dependence on personal daily assistance or even to becoming significantly more prone to fatal falls [1]. Prevention through physical activity programs, are used to slow down and delay these aging effects, by improving individuals’ agility, flexibility and body improved functionality. Most of these programs take place in in-water environment due to age limiting factors such as high-risk osteoporosis, reduced mobility, higher risk of fracture from falls, arthrosis and spinal disorders among other.

Objective
To assess the effects of two strength and conditioning programs in strength and dynamic balance in older adults.

Methods
One hundred elderly (36 males and 64 females) aged 67 ± 5.2 years old enrolled the 5-year long intervention program and were assessed for lower body strength (LBS) and dynamic balance (DB). Two intervention programs were set up and subjects were included in each group according to their own will. Program A (n = 52; 24 males and 28 females; age 67.2 ± 5.2 years) consisted of 2 in-water sessions and 1 in dry-land sessions per week. Program B (n = 48; 12 males and 36 females; age 67 ± 5.2 years) consisted of 1 in-water sessions and 1 in dry-land session per week. Wilcoxon test was used on inferential analysis for repeated measures (pre-post). Significance level was kept at 5%. The effect size for this test was calculated by dividing the z value by the square root of N [2].

Results
Combined data from both programs showed that LBS and DB improved significantly at the end of the intervention programs: LBS from 18.3±3.2 reps to 18.8±3.1 reps (p=0.003; r=0.295), DB 4.2±0.7 secs to 4.0±0.7 secs (p=0.017; r=0.245). Program A significantly improved LBS from 19.1±2.8 reps to 19.9±2.7 reps (p=0.001; r=0.465) but not DB 4.1±0.7 secs to 4.0±0.7 secs (p=0.083; r=0.240). No differences were found neither in Program B LBS – 17.5±3.4 reps to 17.6 ±3.1 reps (p=0.462; r=0.106) – nor DB - 4.2±0.6 secs to 4.1±0.6 secs (p=0.083; r=0.250).

Conclusions
Strength and conditioning programs over a 5-year time span seem to substantially delay the negative effects of aging on LBS/DB in the elderly. No visible decline in the assessed parameters was observed. Our results may suggest different effects of in-water and dry-land programs. However, participants generally responded positively to both intervention programs.

References

Keywords
Elderly, Physical activity, Quality of life, Strength, Balance.

O110
Compassion attributes and actions in adolescents: are they related to affect and peer attachment quality?
Marina Cunha1,2, Carla Figueiredo1, Margarida Couto1, Ana Galhardo1,2
1Instituto Superior Miguel Torga, 3000-132 Coimbra, Portugal; 2Cognitive and Behavioural Center for Research and Intervention, Faculty of Psychology and Educational Sciences, University of Coimbra, 3001-802 Coimbra, Portugal
Correspondence: Marina Cunha (marina_cunha@ismt.pt)
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Background
Research has been showing potential benefits of compassion practice in various populations, nonetheless it is relevant to extend the assessment of compassion attributes and actions for adolescents and explore its relationship with other psychosocial adjustment constructs.

Objective
To explore association patterns between the various directions of compassion (self-directed, directed to others and receiving compassion from others) and variables related to affect, social comparison and peers’ attachment to quality.

Methods
A total of 338 adolescents, aged between 12 and 18 years old, completed a set of self-report instruments to assess their compassionate attitudes and actions towards themselves and others (EAAC), peers attachment to quality (AQ-C), positive and negative affect (PANAS), and peers social comparison (SCS-A).

Results
Significant correlations were found in the expected direction between self-compassion, compassion for others and received from others and the study variables (positive and negative affect, social comparison and attachment style). Specifically, positive affect, positive peer comparison, and secure attachment style were positively associated with compassionate attributes and actions. Negative affect, in turn, showed a negative correlation with compassionate actions in the three analysed directions, and with compassionate attributes when considering receiving compassion from others. The avoidant insecure attachment style revealed a negative association with compassionate attributes and actions in the different directions. Finally, the ambivalent insecure attachment style revealed a significant negative correlation with self-directed compassionate actions and with receiving compassion from others, regarding actions and attributes.

Conclusions
These findings suggest the importance of stimulating a compassionate mind in adolescents. In fact, the positive association between...
Association palmar grip strength with self-reported symptoms in the arm

Alice Carvalhais 1, Tatiana Babo, Raquel Carvalho 1, Paula Rocha, Gabriela Brochado 1, Sofia Lopes 1,2
1 Department of Technology Physiotherapy, Cooperativa de Ensino Superior Politécnico e Universitário, Polytechnic Institute of Health, 4585-116 Paredes, Portugal; 2 Department of Physical Therapy, School of Health Technology, Polytechnic Institute of Porto, 4200-465 Porto, Portugal.

Background
World Health Organization (WHO) defined work-related musculoskeletal injuries as multifactorial diseases. These injuries are the main concern of public health and individual health, and are becoming increasingly frequent, in both developed and developing countries. Workers during working hours are often exposed to repetitive movements, the lifting and carrying heavy loads, verifying an increase in demand in terms of muscle strength in the upper limbs. The palmar grip strength provides an objective index of the functional integrity for the evaluation of upper limbs.

Objective
Verify that the palmar grip strength is associated with self-reported symptoms in the arm in industry worker’s electrical components.

Methods
An observational, analytical study was performed on a sample of 167 workers. The Nordic Musculoskeletal Questionnaire was applied and the palmar grip strength was measured using the hydraulic dynamometer. Descriptive statistics were used to analyse the prevalence of self-reported symptoms and the U test of Mann-Whitney, Kruskal-Wallis H test, Chi-square test and Fisher’s exact test was used to analyse relationships between variables, with a 95% confidence level.

Results
The palmar grip strength was related to self-reported symptomatology in the dominant upper limb, shoulder regions (p = 0.005) and wrist (p = 0.005) in females. It was also found that the risk factors are not associated with palmar grip strength in individuals of both genders.

Conclusions
Palmar grip strength is associated with self-reported symptomatology in the shoulder and wrist of the dominant upper limb in female workers.

Keywords
Dynamometer, Palmar grip strength, Upper limb, Symptomatology auto referred.

Background of Behaviours and Social-skills of Adolescents can contribute to the construction of an effective school-based intervention to promote healthy lifestyles.

Objective
Identify homogeneous groups (clusters) according to lifestyle and social skills.

Methods
This cross-sectional study included 1,008 students from 5 elementary schools of Tâmega and Sousa region, mean age of 13.43 (SD = 1.1) and 50% of girls. A sociodemographic questionnaire “My Lifestyle” was used with 28 items composing 4 subscales: Physical Exercise (PE), Nutrition, Self-Care, Monitored Safety, Use of Drugs and Similar (UDS). (0.41 < α < 0.85). A “Social Skills Inventory for Teenagers” questionnaire (Social-Skills) was applied, including subscales: Empathy, Civility, Assertiveness, Self-Control, Affective Approach and Social-Development (0.64 < α < 0.90). Both questionnaires had 5 categories of answers from “almost always” to “almost never” or “rarely”. In order to identify homogeneous groups of students, according to lifestyle and social skills, it was performed a k-means cluster analysis

Results
For Lifestyle, mean scores were: UDS = 4.09, Self-Care = 4.07, PE = 3.86, Monitored Safety = 3.63 and Nutrition = 3.40. For Social-Skills, 50.7% had a highly elaborate repertoire of Social Skills, 11% had equal repertoire and 2.7% had lower average of social skills repertoire. It was decided to follow a three-cluster solution. Cluster 1 included students with a poor elaborated repertoire of social skills, but with good lifestyle indicators in all subscales. In cluster 2, students had a good repertoire of social skills, with good lifestyle indicators in all subscales, except for subscales of nutrition with poor indicators (38.7) and Monitored Safety (46.95). Cluster 3 included students with highly developed repertoire of social skills and the best lifestyle indicators.

Conclusions
Results revealed healthy practices in general, however students had the lowest scores in Nutrition, especially in sugar intake and absence of dietary plan. Students included in cluster 2 presented also the lowest results in Monitored Safety, especially about driving with alcohol. These students at risk of develop unhealthy lifestyle need special attention. The high profile of social skills in particular Affective Approach and Assertiveness, should be taken into account as a mechanism for intervention programs. In addition, relevance given to PE, should also be used as a good strategy to reinforce the accomplishment of healthy eating habits in all students. In another point of view, good indicators of lifestyles (cluster 1) can act as matrix to reinforce improvements in social-skills.

Keywords
Adolescents, Lifestyle, Social Skills.

Social-skills as facilitators of a healthy lifestyle

Luísa Aires 1, 2, Sara Lima, Susana Pedras, Raquel Esteves, Fátima Ribeiro, Assunção Nogueira, Gustavo Silva 3, Teresa Herdiero 3, Clarisse Magalhães 3
1 Instituto Universitário da Maia, 4475-690 Maia, Portugal; 2 Centro de Investigação em Atividade Física Saúde e Lazer, Universidade do Porto, 4099-002 Porto, Portugal; 3 Cooperativa de Ensino Superior Politécnico e Universitário, Polytechnic Institute of Health, 4585-116 Paredes, Portugal;
4 Research Center in Sports Sciences, Health Sciences and Human Development, University of Beira Interior, 6201-001 Covilhã, Portugal.

Background
Palliative care (PC) is an inevitability in view of the demographic and epidemiological transition curves of Western society. The inclusion of a PC Curricular Unit (CU) in the Nursing Undergraduate Program (NUP) translates into the acquisition of competencies that allow caring for people and families in need of those carefulness. Although considering professional, institutional and family barriers, there is evidence that students apply, in clinical practice, the principles inherent of PC [1]. During clinical education, students are confronted with persons in need of PC, however without benefiting from such care. These experiences can form the basis, from which, it is possible to build the teaching-learning process of future nurses, regarding this theme.

Keywords
Palliative care: nursing student’s conceptions and motivations

Suzana Duarte, Vítor Parola, Adriana Coelho
Escola Superior de Enfermagem de Coimbra, 3046-851 Coimbra, Portugal

Correspondence: Suzana Duarte (susanafcdurante@gmail.com)

BMC Health Services Research 2018, 18(Suppl 2):O111

Correspondence: Gabriela Brochado (gabriela.brochado@ipsn.еспу.pt)

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Objective
To identify the conceptions and motivations for the frequency of the CU option of PC, by nursing undergraduate students’.

Methods
In the first class, nurses’ students were asked to anonymously write what they understood as PC and the motivation for attending this CU. The 210 responses collected over 5 years were subjected to content analysis [2].

Results
The PC conceptions reported were grouped into the categories: “Care for people in the final stages of life”, “Care to alleviate suffering” and “Comfort care”. The reasons for choosing the PC option were grouped in “Difficult and not tackled area”, “Area that arouses more interest” and “Previous Experiences”. It is verified that the concept of PC remains as care for people in terminal phase of life and in suffering. Some students report experiencing situations that would lead to PC, conditions of therapeutic obstinacy and end of life in circumstances of intense suffering. Students also mention the nurses’ attempts to provide those carefulness, which is not well favoured for, in the hospital wards. Students indicate interventions that are intrinsic to palliative care, such as, communication, psychological support, coping with death and mourning, without any reference to the need for knowledge in other areas, namely pathology, pharmacology, or maintenance and healthcare technologies. The orientation of care for quality of life, family integration and management of symptoms is not considered.

Conclusions
There is a need to include in each NUP a PC CU, preferably after a period of clinical education in hospital wards. In this way it is possible to consider the previous experiences of the students, capitalizing them to the understanding of the fundamental principles of Palliative Care.

References

Keywords
Palliative Care, Nursing student’s, Motivations and conceptions.

O114
“As eat” effects of a physical exercise program and nutrition in obese and binge eating adults
Ana Barroco1, José A Parraça1, Nuno Pascoa1, Daniel Collado-Mateo2, Jose Adsuar1, Jorge Bravo1
1Department of Sports and Health, School of Science and Technology, University of Évora, Portugal; 2School of Sports and Leisure, Polytechnic Institute of Viana do Castelo, Portugal
Correspondence: José A Parraça (jparraca@uevora.pt)
BMC Health Services Research 2018, 18(Suppl 2):O114

Background
Overweight and Obesity are defined as an abnormal or excessive fat accumulation and present a health risk. Binge eating is a food disorder characterized by episodes of abusive food intake in the absence of regular compensatory behaviours such as vomiting or abuse of laxatives. Those who suffer from this disorder often increase their weight and fat mass by excessive intake of calories, thus becoming overweight or obese.

Objective
To determine the relation between the effects of an exercise and nutrition program, in overweight or obese adults (30-60 years) and binge eating, regarding body composition and physical fitness. The program also aimed to promote learning and self-control in the practice of physical activity and in the food choices of this population.

Methods
41 patients from USF Planicie de Évora. Groups were randomly assigned: the experimental group (N = 23) and the control group (N = 18). The study lasted eight months and consisted of 47 practical sessions of one-hour group exercise, twice a week, one weekly self-help session, and three sessions of nutritional monitoring throughout the program. Practical sessions were structured with specific exercises aimed at improving the different components evaluated; namely in physical fitness (strength, cardiovascular endurance and flexibility) and body composition (fat loss). There were significant improvements in body composition, namely in the percentage of fat mass (40.75 (±6.46) to 37.44 (±7.06) p = .000), fat free mass (59.98 (±6.44) to 62.26 (±7.56) p = .001), of fat mass in the trunk (35.95 (±4.90) to 32.06 (±4.93) p = .000), in the Visceral index (12.00 (±3.42) to 10.88 (±2.97) p = .000) and in metabolic age (59.88 (±9.35) to 55.94 (±7.92) p = .024). There were improvements in physical fitness, mainly in trunk flexibility (-0.18 (±9.72) to 8.93 (±10.06) p = .002) and in leg strength (0.10 (±0.03) to 0.13 (±0.02) p = .034) and arms (25.48 (±8.91) to 30.81 (±7.68) p = .000). Regarding weight, there is a tendency to significance, since there was a significant improvement (92.25 (±12.73) to 88.93 (±13.77) p = .056).

Conclusions
We conclude that the physical exercise and nutrition program allows improvements in physical fitness and body composition in the obese population suffering from binge eating.

Keywords
Exercise, Nutrition, Obesity, Body composition, Food addiction.
strength and endurance and nimbleness categories. These variables statistically significantly predicted %BF, F(14.70) = 2.249, p < 0.014, R² = 0.310. Only three variables (social recognition, positive health and weight management) added statistically significance to the prediction, p < 0.05. The unstandardized coefficient, B1, for social recognition is equal to 2.178, for positive health is equal to 4.860 and for weight management is equal to 2.490.

Conclusions
Social variables (specifically social recognition), positive health and weight management are important for body mass fat reduction, more than variables related, for example, with health concerns. It is important, in future studies, to understand what processes influence those relations. The results of our study reinforce the importance of these three variables for the reduction of body fat mass emphasizing that it may be important to take these issues into account not only to maintain the adherence of individuals, but also to promote the practice of physical exercise.

Keywords

O116 Simulation as a pedagogical strategy in nursing teaching
Cláudia Chambers1, Catarina Carreira1, Catarina Pinheiro1, Luís Ramos1, Catarina Lobão1,2
1School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal

Correspondence: Luís Ramos (luis_filipe-ramos@hotmail.com)
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Background
Nowadays, the use of laboratories with specific equipment and classes with resource to simulated practice, are increasingly advocated, especially in graduation courses, whose practice is a crucial tool for students to apply in real life situations.

Objective
Therefore, we intended to know the perception of students and teachers of a nursing degree, on the use of simulated practice as a pedagogical strategy.

Methods
To achieve this, we developed a research study using a qualitative approach and a semi-structured interview applied to six students of the nursing graduation course and to seven teachers who teach classes, with the resource of simulated practice, at Escola Superior de Saúde de Leiria.

Results
From the results we verified that for teachers, simulation is a pedagogical strategy in the development of the students’ competences, in a way that will translate in a provision of care based on the scientific knowledge, safety and humanism that is expected from a health professional. However, from the students’ perspective, we verified that the results indicate that the simulation is undoubtedly an added value, since the interviewees were able to approach the concept of simulated practice at several levels, also enabling to highlight the partnership between the pertinence and the contributions of the simulation and, finally, to mention several constraints and respective solutions.

Conclusions
As Goostone et al., (2013) [1] states, simulation is a pedagogical strategy that allows the student to acquire skills necessary for clinical practice, in a risk-free real environment, that is, students are faced with a clinical situation like what they would find in a real clinical environment, receiving feedback on their performance. Thus, it’s fundamental that there are teachers with the necessary training to implement this type of pedagogical strategy, as well as the necessary resources, associated to the will and commitment of the students. This triad is essential for the development of the students’ competencies as future professionals. In summary, the groups interviewed highlighted the importance of simulation, being able to answer to our research questions, complementing each one, once they recognized the importance of simulation in the health field.

References

Keywords
Simulation, Nursing, Education.

O117 Optimising protocol using dual in-situ hybridization to breast cancer in HER2 status
Paulo Teixeira1,2, Maria F Silva1,2, Paula C Borges1, José M Ruivo2, Diana Martins2, Fernando Mendes2
1Department Biomedical Laboratory Sciences, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal; 2Pathologic Anatomical Service, Centro Hospitalar e Universitário de Coimbra, 3000-075 Coimbra, Portugal

Correspondence: Paulo Teixeira (paulo.teixeira@estescoimbra.pt)
BMC Health Services Research 2018, 18(Suppl 2):O117

Background
Human epidermal growth factor receptor 2 (HER2) is overexpressed in 20 to 30 % of breast cancer, as well as in others human cancers [1,2]. The Dual in-situ hybridization (DISH) assay is widely used to study HER2 status, and gives predictive and therapeutic information in invasive breast cancer, although it is dependent on pre-analytical variables, as ischemic time and fixation, among others [1,3].

Objective
The aim is to implement a HER2 DISH assay, contributing to its optimization and decrease of variability, clarifying the pre-analytical and analytical variables, with impact in tissue staining and morphology.

Methods
Forty-four (44) cases of invasive breast cancer cases previously scored with HER2 2+, were included in this study. Thin 4 μm paraffin sections were submitted to DISH. Unsuccessful cases were submitted to subsequent DISH protocols to attempt a valid result. Slides were evaluated according to staining and morphology integrity, by three independent observers proficient in this methodology, in a blind way, with a light microscope.

Results
From the 44 cases, 30 (68.2%) were readily validated, since 14 (31.8%) showed nuclear vacuolization and morphologic disruption leading to further tests with optimized protocols. Unsuccessful cases showed severe morphology damage and were reprocessed with further optimized protocols.

Conclusions
According to the obtained results, we can conclude that the pre-analytical variables with major impact on the standardization of the results were time of cold ischemic; unsliced operatory specimens and length of fixation. Analytical variables as time and temperature of cellular permeabilization can be changed to improve inadequate tissue preservation.

References
As the human body ages, its function also tends to decline resulting in a higher risk of development of diseases. This leads to the presence of multiple and complex medications in the life of many older adults (OA). As the self-management and adherence behaviours of these medications require the development of competences, it is important to develop a quick and easy instrument to provide systematic data for the health professional that will allow a better intervention, with higher chance of success.

Methods
Applying the AGITE to 146 elders in day centres in Central Portugal, over 30 factors analysis (FA) using the eigenvalue criteria, and internal consistency (IC) through Cronbach’s Alpha were performed.

Results
From the EFA, using varimax rotation and screen plot analysis, an acceptable KMO of 0.653 was obtained, with no items being eliminated through analysis of anti-image matrix. A total of five dimensions emerged explaining 53.6% of the variance: "Engagement", "Neglect and External Influences", "Perceived Benefits", "Healthcare Professionals Support", and "Value assigned to Written Information". Through analysis of the items of each dimension, higher scores of "Engagement" indicate a responsible attitude towards self-management and adherence, while higher scores of "Neglect and External Influences" demonstrate a tendency to cease medication, according to individual and non-professional external beliefs. Regarding the dimension "Perceived Benefits", higher scores evidence how the elder positively perceives the effects of the medication, while higher scores of "Healthcare Professionals Support" are related with perceived importance of the healthcare professionals in the medication-taking ability. Higher scores of "Value assigned to Written Information" demonstrate a tendency to attribute significance to written data regarding medication. Overall the questionnaire dimensions demonstrate questionable to acceptable IC (0.6 < α < 0.8).

Conclusions
New analysis of the psychometric properties evidences the emergence of new dimensions, allowing for a wider understanding of the profile of the medication-taking ability of the elder population in Portugal. These new dimensions will provide a better analysis of this skill to the healthcare professional, allowing a more personalized intervention, with higher chance of success.

Keywords
Dual in situ hybridization, Pre-analytical variables, Breast cancer, Optimization protocols.

O118
Psychometric properties update of AGITE – a medication self-management and adherence in the elderly questionnaire
Maria Almeida1, Suzana Duarte1, Hugo Neves2,3
1Coimbra Nursing School, 3046-851 Coimbra, Portugal; 2Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal

Correspondence: Maria Almeida (mlurdes@esenfc.pt)
BMC Health Services Research 2018, 18(Suppl 2):O118

Background
The AGITE Questionnaire is a quick and easy assessment tool that identifies significant gaps in medication-taking and adherence behaviour in a wide range of elderly populations.[1] As these medications require the development of competences, it is important to develop a quick and easy instrument to provide systematic data for the health professional that will allow a better intervention with higher chance of success.

Methods
Application of the AGITE to 146 elders in day centres in Central Portugal, exploratory factorial analysis (EFA) using the eigenvalue criteria, and internal consistency (IC) through Cronbach’s Alpha were performed.

Results
From the EFA, using varimax rotation and screen plot analysis, an acceptable KMO of 0.653 was obtained, with no items being eliminated through analysis of anti-image matrix. A total of five dimensions emerged explaining 53.6% of the variance: "Engagement", "Neglect and External Influences", "Perceived Benefits", "Healthcare Professionals Support", and "Value assigned to Written Information". Through analysis of the items of each dimension, higher scores of "Engagement" indicate a responsible attitude towards self-management and adherence, while higher scores of "Neglect and External Influences" demonstrate a tendency to cease medication, according to individual and non-professional external beliefs. Regarding the dimension "Perceived Benefits", higher scores evidence how the elder positively perceives the effects of the medication, while higher scores of "Healthcare Professionals Support" are related with perceived importance of the healthcare professionals in the medication-taking ability. Higher scores of "Value assigned to Written Information" demonstrate a tendency to attribute significance to written data regarding medication. Overall the questionnaire dimensions demonstrate questionable to acceptable IC (0.6 < α < 0.8).

Conclusions
New analysis of the psychometric properties evidences the emergence of new dimensions, allowing for a wider understanding of the profile of the medication-taking ability of the elder population in Portugal. These new dimensions will provide a better analysis of this skill to the healthcare professional, allowing a more personalized intervention, with higher chance of success.

Keywords
Dual in situ hybridization, Pre-analytical variables, Breast cancer, Optimization protocols.

O119
Emotional intelligence and fear of death in Spanish elders
Pedro García-Ramiro1, Juan FJ Diaz2, Maria González-Melero1, María DCP Jiménez1, Antonio MP Jiménez1, Francisco JR Peregrina1
1Universidad de Jaén, 23071 Jaén, Spain; 2Universidad Las Palmas de Gran Canaria, 35001 Las Palmas de Gran Canaria, Spain

Correspondence: Pedro García-Ramiro (pgarri1ro@ujaen.es)
BMC Health Services Research 2018, 18(Suppl 2):O119

Background
Researchers, stakeholders and policy makers agree about the importance of the population ageing in modern societies. Emotional Intelligence (EI) has generated a broad interest in the scientific community in Spain [1]. Prestigious social scientists from different lines of research contribute to assess important theoretical and empirical topics on this construct [2]. Aging is a process during which important changes occur in different areas of development and emotional intelligence plays an essential role. Throughout the years, the subject of death has been conceived in different ways. People abstain from talking about it, and a conduct of avoidance can be observed manifesting itself in fear and anxiety [3].

Objective
The objective of this study was to examine the relationship between emotional intelligence and fear of death in an older population.

Methods
A Spanish sample of 384 older people aged 65 years and older (51.82% women; 71.23 ± 8.34 years of age), without cognitive impairment, were included in this descriptive and correlational study. Data on emotional intelligence and fear of death were obtained through the TMMMS-24 and Collett-Lester scales, respectively.

Results
Structural equation modelling indicated that emotional intelligence exerted an influence on fear of death. The emotional perception component was positively correlated with the fear of death (r = 0.14; p < 0.05), while understanding and emotional regulation were negatively correlated with fear of death (r = -0.12; p < 0.001). The higher scores for fear of death were associated with the female gender, and singles. These aspects underscore the importance of the results of this study.

Conclusions
These findings show that high levels of emotional intelligence were associated with less fear of death. After controlling sociodemographic variables, the EI dimensions, emotional perception and emotional regulation, accounted for part of the variance in several fears of dead facets. These dimensions can have an important role in the fear of dead of older people.

References

Keywords
Emotional intelligence, Fear of death, Ageing, Older adults.
O120
Vitamin D in food supplements: are we taking too much?
Isabel M Costa, Alexandra Figueiredo, Deolinda Auxtero
Instituto Universitário Egas Moniz, 2829-511 Caparica, Portugal

Correspondence: Alexandra Figueiredo (alexandra.f@netcabo.pt)
BMC Health Services Research 2018, 18(Suppl 2):O120

Background
Over the last years, an increase in vitamin D (VitD) supplements intake has been observed. Evidence has suggested multiple effects of VitD beyond bone homeostasis. Low VitD levels are associated with numerous disorders including diabetes, cancer, cardiovascular disease, Parkinson’s disease, among others. Consumers have the general misperception that “vitamin” denotes something harmless and vital, disregarding its potentially harmful effects. Although vitD toxicity is uncommon, case reports attributed to vitD supplementation have raised. Being a fat-soluble vitamin, excessive supplementation may result in body accumulation and toxicity. It increases intestinal calcium absorption and plays a central role in its homeostasis. Thus, most symptoms of toxicity result from hypercalcemia. Adverse effects include gastrointestinal disorders (anorexia, diarrhea, nausea, vomiting), muscle and joint pain, cardiac complaints, hypertension, central nervous system effects and renal disorders (polyuria, polydipsia).

Objective
The aim of this study was to evaluate whether VitD3 (cholecalciferol) daily dose indicated on food supplements (FS) labels coincided with the recommended daily allowance (RDA) for this vitamin defined by the European Union Directive.

Methods
Labels of 110 FS sold in Portuguese pharmacies, supermarkets or health shops were examined. Selection criteria included: oral solid pharmaceutical forms for adults, containing vitD in its composition, as stated in the label, regardless of the purpose of the FS.

Results
66.4% of FS presented vitD label doses above RDA and four of them indicated a daily dose ≥ the tolerable upper intake level defined by EFSA (UL=100 μg/day). In the majority of the FS evaluated, vitD label dose far exceeded RDA value and some exceeded UL defined by EFSA.

Conclusions
At present, the safety of FS and the authenticity of label information is exclusively ensured by the economic operators who place FS on the market. Since FS are usually taken without any medical supervision or counselling and attending the potential adverse effects of vitD excess, it is imperative that the daily doses of vitD present in FS are reviewed attending to RDA values. Authors also suggest that FS should be under the same quality control of pharmaceuticals, regarding FS consumers health.

Keywords
Vitamin D, Food Supplements, Recommended Daily Allowances, Tolerable Upper Intake Level.

O121
Functional ability and risk of falling - a base for exercise prescription
Silvia Vaz, Anabela Martins, Carla Guapo, Sara Martins
Physiotherapy Department, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal

Correspondence: Silvia Vaz (leoninta_vaz@hotmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O121

Background
Falls are currently considered one of the most common and serious public health problems [1, 2]. Faced with this problem, it becomes necessary to explore which factors can better predict the risk of falls in individuals living in the community [3], so that, preventive measures can be considered.

Objective
To identify fall risk indicators and to relate them to exercise prescription levels; to relate the history of falls, the functional capacity (measured through the Timed Up & Go, 10-meter walking speed test, Step test) and the fall risk factors and propose a guide based on those relations to address exercise prescription.

Methods
Descriptive and exploratory study. Two hundred community dwelling adults aged 55 or older were assessed, integrating two sub-samples, a Portuguese and a Polish. Study participants were assessed for socio-demographic data, history of falls, fear of falling, exercise, sedentary lifestyle, hearing problems and/or dizziness, visual problems, alcohol consumption, exercise self-efficacy and confidence in activities of the daily life (FES-Portuguese version). Functional capacity was assessed by three golden measures for the risk of fall: the Timed Up and Go (TUG), the 10-meter walking speed test and the Step Test (15s). The statistical design included descriptive analyses, inferential analyses (bivariate: t-test for independent samples, One-Way ANOVA and Pearson’s correlation coefficient).

Results
Fall incidence was 39.5% and 45.3% in the total and Portuguese samples, respectively. TUG, 10-meter walking speed test and step test can distinguish those with history of falls from those without, with statistically significant differences (p ≤ 0.05). Taking more than 4 different medications per day, fear of falling, hearing problems and/or dizziness and the need for help getting up from a chair were correlated to the history of falls, the TUG, the walking speed and the step test (p ≤ 0.05). The sedentary lifestyle and the use of assistive devices were associated with worst performance in the functional tests (p < 0.05) in the Portuguese sample. TUG, 10-meter walking speed test and step test were correlated with exercise self-efficacy.

Conclusions
The incidence of falls is higher than literature has reported and it is inversely associated with the functional capacity of community-dwelling adults aged over 55 years old. Data from this study is a valuable basis for exercise prescription, taking into account the levels of risk and the components of exercise prescription.

References

Keywords
Risk of fall, Functional capacity, Prevention of falls, Exercise prescription, Self-efficacy.

O122
The impact of the FIFA 11+ on physical performance of amateur futsal players: short and long term effects
Mário Lopes1, Daniela Simões, João M Rodrigues2,4, Rui Costa1,5, José Fernando Ribeiro1,7
1School of Health Sciences, University of Aveiro, 3810-193 Aveiro, Portugal; 2Santa Maria Health School, 4049-024 Porto, Portugal; 3Institute of Electronics and Informatics Engineering of Aveiro, 3829-193 Aveiro, Portugal; 4Department of Electronics, Telecommunications and Informatics, University of Aveiro, 3810-193 Aveiro, Portugal; 5Center for Health Technology and Services Research, University of Aveiro, 3810-193 Aveiro, Portugal; 7Research Centre in Physical Activity, Health and Leisure, Faculty of Sport, University of Porto, 4200-450 Porto, Portugal; 7Institute of Biomedicine, University of Aveiro, 3810-193 Aveiro, Portugal

Correspondence: Mário Lopes (marioopes77@ua.pt)
BMC Health Services Research 2018, 18(Suppl 2):O122

Background
The effects of the FIFA 11+ on physical performance parameters has demonstrated controversial results.

Methods
The impact of the FIFA 11+ on physical performance of amateur futsal players: short and long term effects
Mário Lopes, Daniela Simões, João M Rodrigues, Rui Costa, José Fernando Ribeiro

1School of Health Sciences, University of Aveiro, 3810-193 Aveiro, Portugal; 2Santa Maria Health School, 4049-024 Porto, Portugal; 3Institute of Electronics and Informatics Engineering of Aveiro, 3829-193 Aveiro, Portugal; 4Department of Electronics, Telecommunications and Informatics, University of Aveiro, 3810-193 Aveiro, Portugal; 5Center for Health Technology and Services Research, University of Aveiro, 3810-193 Aveiro, Portugal; 7Research Centre in Physical Activity, Health and Leisure, Faculty of Sport, University of Porto, 4200-450 Porto, Portugal; 7Institute of Biomedicine, University of Aveiro, 3810-193 Aveiro, Portugal

Correspondence: Mário Lopes (marioopes77@ua.pt)
BMC Health Services Research 2018, 18(Suppl 2):O122

Background
The effects of the FIFA 11+ on physical performance parameters has demonstrated controversial results.
Effects of aquatic fitness in older women conditioning: an 8-week program

Pedro Morouço¹, Sandra Amado¹,², Susana Franco⁴, Fátima Ramalho⁴
¹Centre for Rapid and Sustainable Product Development, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; ²School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; ³Centre for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; ⁴Sport Sciences School of Rio Maior, Polytechnic Institute of Santarém, 2040-413 Rio Maior, Portugal

Correspondence: Pedro Morouço (pedro.morouco@ipleiria.pt)

BMC Health Services Research 2018, 18(Suppl 2):O123

Background

There are several evidences in the literature demonstrating a high positive association between increased levels of exercise and improved health, specifically in older adults [1]. As such, in recent years there has been a large number of studies examining the benefits imposed by different types of exercise (e.g. resistance training [2], and aquatic fitness [3]). However, in addition to the benefits imposed, it is crucial that the exercise is motivating and challenging.

Objective

It was aimed to examine the possible effects on conditioning induced by 8-weeks of aquatic fitness, in female older adults.

Methods

Fourteen women (64.3 ± 7.3 years old) enrolled in bi-weekly aquatic fitness of 45’ sessions for 8 weeks. Before and after the 8 weeks, participants performed the Senior Fitness Test [2], hand-grip strength and body measures. All participants were volunteer, informed consent was obtained and all procedures were in accordance to Helsinki Declaration. Sessions were instructed by a CSCS®.

Results

Significant and meaningful improvements were observed in lower body strength (p < 0.001; d = 1.22), lower body flexibility (p < 0.001; d = 3.54), aerobic endurance (p < 0.001; d = 1.35), dynamic balance (p < 0.001; d = 1.53) and hand grip strength (p < 0.001; d = 2.02). Significant, but moderate improvements were observed in body mass (p = 0.021; d = 0.72) and hip circumference (p = 0.048; d = 0.59).

Conclusions

Eight weeks of aquatic fitness induced extensive benefits in older women conditioning, suggesting that this activity is able to promote an increase in life quality. The present results corroborate previous studies, demonstrating that aquatic exercise is a reliable approach for improved health in the elderly.

Acknowledgements

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References


Keywords

Exercise, Health, Aging, Physical Fitness.
Objective

The main goal of this study was to verify if there were differences in the development of motor skills (global and fine) through the scales of the PDMS-2, comparing children that have or do not have siblings.

Methods

In this study 91 children of both sexes participated (30.20 ± 10.56 months). Two groups were created: the sibling group, consisting of 48 children (31.06 ± 10.76 months) and the non-sibling group, consisting of 43 children (29.23 ± 10.37 months). Motor skills were assessed using the PDMS-2 test battery scales. The evaluation was performed during 4 months, 3 times a week and individually (approximately 30 minutes for each child). For the data analysis, we used descriptive and inferential statistics. The Kolmogorov-Smirnov test was applied to test normality, and the Mann-Whitney test was applied to independent samples.

Results

The sibling group achieved, on average, better results in all motor skills (global and fine). However, there were only statistically significant differences in fine motor skills (p = 0.016), where the sibling group had the best results (average = 52.29) compared to the non-sibling group (average = 38.98).

Conclusions

These results show that the presence of siblings in the family context positively influences motor development, providing cooperative activities through play and challenges that improve cognitive, social, emotional and physical development.

Acknowledgements

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References


Keywords

parishes from the urban centre and posteriorly to children living in parishes from the urban periphery.

Results
This study results showed proportionality between overweight or obese children residing in the urban centre, mainly girls, with low socioeconomic status and obese parents that strongly agree that their neighbourhood is unsafe to walk in during the day. Except for mother weight status, none of the variables analysed differentiated normal from overweight or obese children living in the urban periphery, regarding the chi-square tests.

Conclusions
Overall, parents' perceptions of the environment might impact children's weight status. However, even within the same urban area, perceptions of neighbourhood safety change. The aspects that influence children weight status differ according to the parishes they live in - urban centre or peripheral parishes. For example, parents from a significant proportion of overweight or obese children living in the urban centre perceive their neighbourhood environment as unsafe to walk during the day, however, no differences were found between normal and overweight or obese children from the periphery parishes. This should be held in consideration when developing healthy urban planning strategies.

Acknowledgements
Work funded by the Foundation for the Science and Technology (PTDC/DTP-SAP/1520/2014 and grant SFRH/BD/133140/2017).

Keywords
Childhood Obesity, Urban Settings, Neighbourhood, Safety Perceptions.

O127
Cardiovascular causes of disqualification from competitive sports: young vs. veteran athletes
Ana P. Silva, Virginia Fonseca, Carolina Diniz, Daniel Pereira, Rodrigo Sousa, João Lobato
Escola Superior de Tecnologia da Saúde de Lisboa, Instituto Politécnico de Lisboa, 1990-094 Lisboa, Portugal
Correspondence: Ana P. Silva (ana.silva@estelis.ipl.pt)
BMC Health Services Research 2018, 18(Suppl 2):O127

Background
Cardiovascular disease is the most common cause of disqualification from competitive sports. The pre-participation screening is fundamental in order to detect these diseases and is based on clinical history and physical examination in addition to a 12-lead electrocardiogram. Additional tests are requested only for those with any abnormality in the initial evaluation [1-2]. According to previous studies, the most common cardiovascular diseases that disqualify young athletes are different from those associated to veteran athletes: congenital arrhythmias vs. subclinical coronary disease, respectively [3-5].

Objective
To analyse and compare, amongst young and veteran athletes, the cardiovascular causes of disqualification from competitive sports, consecutively screened at a sports medicine unit in a decade (2007-2017).

Methods
Descriptive-comparative retrospective study. The study population consisted of all case files from athletes disqualified from competitive sports due to cardiovascular disease during the 2007-2017 period. A sample of 58 case files was divided into group A (young athletes, < 35 years, nA= 36) and group B (veteran athletes, ≥ 35 years, nB=22). It was evaluated the clinical history, sport disciplines, symptoms and comparisons of cardiovascular diseases. Descriptive statistics and statistical inference (Chi-squared distribution) were applied for the characterization and comparison of the study variables.

Results
Both sample groups consisted mainly in male athletes (group A 94.4%, group B 100%). The most referred symptom in group A was palpitations (16.7%), whereas in group B was chest pain (36.4%). There was a significant association between relevant cardiovascular history and veteran athletes. The most frequent cardiovascular diseases in group A were hypertrophic cardiomyopathy (19.4%), arterial hypertension (11.1%), left ventricle noncompaction (8.3%) and great vessel translposition (8.3%). Arterial hypertension (50%) and coronary disease (45.4%) were the most frequent diseases that disqualified the practice of competition sports in veteran athletes. It's important to emphasize that some veteran athletes presented simultaneously more than one cardiovascular cause of disqualification.

Conclusions
The most frequent cardiovascular diseases in groups A and B matched those found in literature [3-5]. The prevalence of hypertrophic cardiomyopathy and coronary disease in the respective groups may be associated with a higher awareness towards the dangers of these particular diseases in the practice of competition sports. The data in this study confirms the key role of pre-participation screening for the identification of cardiovascular diseases that can cause sudden cardiac death during sport.

References

Keywords
Cardiovascular diseases, Competitive sports, Pre-participation screening.

O128
Bioethics, health promotion and sustainability: interfaces in higher education
Ivani N Carlotto, Maria AP Dinis
Energy, Environment and Health Research Unit, Energy, Environment and Environmental & Public Health Research Laboratories, Fernando Pessoa University, 4249-004 Porto, Portugal
Correspondence: Ivani N Carlotto (ivani.carlotto@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O128

Background
Universities are essential institutions for health promotion (HP) [1]. As they have their own ethos and distinct cultures, they may act as potential enhancers of the conceptual frameworks of HP and interdisciplinary values such as equity, social justice and sustainable growth [2]. Bioethics, as a transversal discipline, seeks to ethically analyse and systematize such values, strengthening the synergy between health and sustainability [3]. Bioethics is a reflexive, mutually shared and interdisciplinary tool whose goal is to promote health and sustainability in an integrated and coherent way, adapting life actions in their equitable and inclusive characters.

Objective
1) Identify how bioethics takes place in daily life and how it is possible to establish links between scientific and ethical knowledge, in order to avoid negative impacts on people’s lives; 2) Describe the appropriate bioethical tools (principles) for intervention in the context of higher education (HE), HP and sustainability.

Methods
Exploratory-descriptive methodology using a quasi-qualitative approach. Sample: University teachers from Rio Grande do Sul/Brazil, random
sample, probabilistic sampling by convenience, CI = 95%, n = 1400 persons. The research was approved by the Research Ethics Committee of the Hospital de Clínicas of Porto Alegre (HCPA)/Brazil, Ethics Committee of the Universidade Federal de Santa Catarina (UFSB)/Brazil, and Ethics Committee of the Universidade Federal de Goiás (UFG)/Brazil. The interviews were carried out after receiving the informed consent from the participants, taking into account the assumptions of the National Health Council Brazil (CHN) 466-2012.

Results
Beyond the principalistic formulation - charity, non-maleficence, justice and respect for autonomy [5], certain subjacent referentials, such as, solidarity, shared commitment, and health environment/sustainability were evoked, causing a positive impact on HP, individual and collective well-being, quality of life, inclusion and social justice in the University environment.

Conclusions
HE upholds a fundamental role in HP for their faculty teachers. Universities act as places for investigation and learning in a way that it involves HP activities [6]. Bioethics, as a transdisciplinary activity, seeks to help building qualified actions in health, which uphold and promote well-being, cohesion, inclusion, sustainability and social justice, with the respective conceptual clarity that resides therein [2, 7].

References

Keywords
Bioethics, Health Promotion, Higher Education, Sustainability.

O129
Pilot program to develop clinical skills in counseling-based motivational interview (CBMI) to prevent obesity in Chile
Ricardo Cerda1, Daniela Nicolletti1, Macarena P Lillo1, Margarita Andrade, Patricia Galvez2, Lorena Iglesias1, Denisse Parra1, Magdalena C Coke, Natalia Gomez3
1Department of Nutrition, Faculty of Medicine, University of Chile, Santiago, Chile; 2Department of Nursing, Faculty of Medicine, University of Chile, Santiago, Chile; 3School of Journalism, Faculty of Communication and Letters, University Diego Portales, Santiago, Chile

Correspondence: Ricardo Cerda (rcerda150@gmail.com)

BMC Health Services Research 2018, 18(Suppl 2):O129

Background
To influence mediator variables of behavioural change in health and the adherence to treatment in an individual context, health professionals and users must develop a help-based relation mediated by effective communication. At the same time, health professionals must trigger processes in the users that allow them to recognize and develop intrinsic motivation towards change. In this sense, a pilot program is proposed for training CBMI for primary health care (PHC) nutritionists that develops knowledge and tools to foster behavioural change in users. The pilot project was developed as part of the Chilean health program “Vida Sana”.

Objective
Describe a training pilot program to develop clinical skills in CBMI, for PHC nutritionists, to prevent obesity in Chile.

Methods
A training program was built comprised by 34 face-to-face hours and 8 hours of accompaniment at the workplace for 13 Nutritionists. The program was based on a constructivist approach centred on the development of skills in the following sequence: critical analysis for regular practice, adherence comprehension and behavioural change, communication skills, motivational interviewing skills, skill integration in a simulated and real situation. The program employed psychometric scales for motivation, beliefs and self-efficacy for CBMI, video analysis, observations performed at the Centre for Clinical Skills at the Faculdad de Medicina de la Universidad de Chile and accompaniment at PHC centres.

Results
Participant knowledge increased on average 5.25 to 20.85 (p = 0.008). The average of total points did not vary at the beginning or at the end (74 pts). Effective beliefs increased from 61.3 to 68.7 (p < 0.05) and self-efficacy from 1617 to 1851 (p < 0.05). Observation and video analysis showed that Nutritionists went from delivering information to open and strategic inquiring during the course. Accompaniment showed that skills were deepened and the level of satisfaction improved with practice.

Conclusions
This is an innovative program that incorporates CBMI and defines a methodology centred on reflection, practice and accompaniment in real and simulated situations. It is necessary to evaluate the effects in indicators that measure user behaviour and the effect and impact on adult obesity. This training program represents a tool to promote behavioural change and adherence in PHC to prevent obesity.

Acknowledgements
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Keywords
Behavior Change, Motivational Interview, Professional Education, Obesity, Nutritionists Skills.

O130
Childhood body fat and motor competence in elementary school (5 to 9 years old)
Francisco Campos1, Ricardo Santos1, Mariana Temudo1, Kátia Sernedo1, Diogo Costa1, Ricardo Melo1, Fernando Martins2,3
1Coimbra Education School, Polytechnic Institute of Coimbra, 3030-329 Coimbra, Portugal; 2Instituto de Telecomunicações, University of Beira Interior, 6301-001 Covilhã, Portugal

Correspondence: Francisco Campos (francicampos@gmail.com)

BMC Health Services Research 2018, 18(Suppl 2):O130

Background
Obesity rates have increased globally in the last decades, justifying the denomination “public health epidemic”. According some studies [1], in Portugal, childhood overweight and obesity affects about 31.5% of elementary school children, with higher values for girls, except between 7.5 and 9.0 years old. Overweight and obesity are strictly related with childhood motor competence [2]. To access overweight and obesity, among others, is recommended the body fat percentage (BFP), classified by age and gender by McCarthy centiles of BFP [3].

Objective
The main objectives of this investigation are: 1) to characterize childhood elementary school overweight/obesity and compare it by gender and age; 2) to correlate childhood elementary school overweight/obesity with motor competence.

Methods
Data was collected from 604 children’s between 5 to 9 years old (7.40 ± 1.16 years old; 295 female) of the 10 elementary schools from...
the “Agrupamento de Escolas de Montemor-o-Velho” (Coimbra-Portugal), using: a) the electrical bio-impedance (model BC-533®) method, to access BFP; and b) a battery of physical tests [shifting platforms and lateral jumps (stability); shuttle run and standing long jump (locomotion); throwing velocity and kicking velocity (manipulation); and handgrip strength] to access motor competence [3]. Data analysis was conducted using IBM SPSS software (version 24.0) for a statistical significance of 10%.

Results
In this study case, only 58.8% (n = 355) of the elementary school children had normal weight, and 41.2% showed overweight/obesity [overweight: 17.0% (n = 103); obesity: 24.2% (n = 146)]. There were no significant statistical differences (p = 0.519) between genders (Mann-Whitney). By age (Kruskal-Wallis), there were significant statistical differences (p = 0.001), specially between the 5 years old (Md=2) [p=0.016 (7 years old; Md=1)]; p=0.003 (8 years old; Md=1); p=0.021 (9 years old; Md=1)] and the 6 years old (Md=2) [p=0.005 (7 years old; Md=1); p=0.001 (8 years old; Md=1); p=0.013 (9 years old; Md=1)]. For Md interpretation, normal weight is classified by 1, overweight by 2 and obesity by 3. The Spearman test (r) allowed to verify significant statistical correlations, two positive [shuffle run (p=0.001; r=0.136); handgrip (p=0.001; r=0.123)] and three negative [lateral jump (p=0.001; r=-0.174); standing long jump (p=0.001; r=-0.249); throwing velocity (p=0.072; r=-0.073)].

Conclusions
It is important to take into account the current recommendations and concerns of the WHO [4] (healthy eating habits, physical activity regular practice), improving body composition and motor competence in childhood from an early age, resulting probably in healthier adults and minimizing possible social problems concerning public health.

Acknowledgements
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References

Keywords
Body Fat Percentage, Elementary School, Motor Competence, Obesity, Overweight.

Objective
Aware of this, the present work has as an objective to evaluate the relationship between the psychological requirements of the work of pregnant women and affectivity.

Methods
It had a convenience sample of 165 pregnant working women living in Burgos (Spain). The study has a cross-cutting nature and the data collection was carried out with the PANAS questionnaire for affectivity rating, ISTAS for psychological demand and an ad hoc questionnaire to collect identification data. The criterion variables were: work psychological requirements (EP), positive affectivity (AP) and negative affectivity (AN).

Results
The results show that pregnant women have high unfavourable exposition levels for health regarding variables of psychological requirements.

Conclusions
The relation between variables showed significant relation between EP and AN variables, concluding that pregnant women with a friendly exposition level of psychological requirements (EP) have a lot of positive affectivity (AP) and less negative. Pregnant women that had an unfavourable psychological exposition level (EP) had more negative affectivity (AN).

Keywords
Working pregnant woman, Affectivity assessment, Psychological requirements of the work.

Background
COPD (Chronic Obstructive Pulmonary Disease) is a chronic and incapacitating disease, characterized by the presence of persistent respiratory symptoms and a gradual decrease in energy [1-3]. The person with COPD has to cope with a complex therapeutic regimen and with the progressive worsening of the clinical condition [3], which may compromise their capacity for self-care. Therefore, people with COPD need support to manage the disease and the therapeutic regimen [4-6].

Objective
The study aims were to study people with COPD perception about their social support, as well as their level of adherence to medications and to analyse the association between perceived social support and adherence to medication.

Methods
This is a quantitative, descriptive and cross-sectional study, with a sample of 45 adults diagnosed with COPD, admitted to medical service at a hospital in the northern part of Portugal, between February and May 2017. Participants mean age was 71 years (SD = 11.9), they were mostly male (86.7%), married (72.7%) and had a low level of education. The measures used were: a sociodemographic and clinical questionnaire, the Social Support Scale (SSS) and Reported Adherence to Medication Scale (RAMS).

Results
The results showed that the study participants perceived a positive social support (M = 3.5, SD = 0.8). The higher scores were found for the dimension of family and affective support (M = 3.9, SD = 1.0), and the lowest scores were found in the financial support dimension (M = 2.7, SD = 1.0). In relation to the treatment of COPD, most participants reported high adherence levels (M = 12.5, SD = 4.4). A positive association was found between perceived social support and medication adherence (r = 0.46, p = 0.001).
Conclusions
Our results support the importance of social support in adherence to medication, on the person with COPD. The study also suggests the existence of a group of patients more at risk, in terms of lack of social support and non-adherence to medication, pointing out the need to develop nursing interventions focused on the promotion of self-management of COPD.

References

Methods
The study used a quantitative methodology to evaluate the impact of sociodemographic and professional context variables on OC levels. In order to measure OC, we used the scale of three components: affective, normative and calculative [3], adapted for the Portuguese language in 2008 [4]. The sample consisted of 224 health professionals.

Results
The scale presented good levels of internal consistency (Cronbach’s alpha of 0.85), with median OC values correlating positively with age; simultaneously, low OC levels were identified in higher education levels and High values of OC were identified in lower education levels. Finally, OC levels were also significantly higher for the less qualified professionals, auxiliaries showed the highest levels while the doctors showed the lowest levels of OC.

Conclusions
It is emphasized the positive and statistically significant relationship between age and OC, implying higher OC levels in the higher age groups, as identified in previous studies [5-8]. The inverse relation between OC levels and levels of academic qualifications, as identified by other authors [2-3, 5-8], is also a subject of interest. As well as the fact that the lower levels of OC appear in the most qualified professions: doctors and nurses, a not treated aspect in the literature and that characterizes the health professionals of Cape Verde.

References

Keywords
Organizational commitment, Health professionals, Physicians nurses and auxiliaries, Cape verde (Africa).
between free time and food intake and also experience hormonal and brain changes that drive the intake of food with high caloric value [1-3]. In addition, scientific research has shown a healthy and balanced diet to positively influence the quality of sleep [1].

**Objective**
The present study was set out to assess the sleep quality of high school students in Bragança county, and its association with food intake.

**Methods**
The study used non-experimental, analytical and transversal methodology, of epidemiological character and with a quantitative approach. It was intended to carry out the study in a population of 862 high school students. However, due to consent being required from both legal guardians and students, a smaller sample of 345 students was obtained. The data was collected in May 2017 through a questionnaire that included the Pittsburgh Sleep Quality Index (PSQI), validated for the Portuguese population.

**Results**
Throughout the study and following PSQI analysis, it was concluded that 39.71% (n = 137) of participants showed poor quality of sleep (PSQI > 5 points). The correlation between sleep quality and food intake was assessed and a statistically significant association was found between the quality of sleep and the intake of snacks ($X^2 = 17.144; p = 0.000$), sugary products ($X^2 = 18.603; p = 0.000$), fast-food ($X^2 = 12.353; p = 0.002$) and ready meals ($X^2 = 14.852; p = 0.000$). The risk of suffering from poor sleep quality is higher in young populations who frequently eat snacks (OR: 2.811; 99%), sugary products (OR: 1.901; 95%), fast-food (OR: 4.000; 99%) and ready meals (OR: 5.621; 95%) in comparison with young populations who rarely eat this sort of food. The sleep quality is also significantly related with the number of meals young people have in a day ($X^2 = 7.580; p = 0.023$). The risk of having poor quality sleep is 2.240 times higher in young people who rarely eat 4-6 meals a day.

**Conclusions**
A correlation between sleep quality and food intake in the sampled students was seen. The risk of having poor quality sleep is higher in students who frequently eat a high calorie diet and also in students who rarely have 4-6 meals a day. There are several connections between sleep quality and eating habits. Sleep promotion and its connection with standard diets should be included as an essential part of community empowerment for health-promoting lifestyles [1,4,5].

**References**

**Keywords**
Sleep Quality, Food intake, Balanced diet.

**Background**
Obesity is a public health problem in most developed countries [1,2]. In Portugal this scenario is very serious because it stands as one of the European countries with more obese children [3,4], which is associated to poor eating habits, low level of physical activity, and sedentary lifestyles [2].

**Objective**
The objectives of this investigation are: I) to determine the prevalence of overweight/obesity in elementary school children; II) to compare children’s levels of body mass by age and gender; III) to verify correlations between children’s levels of body mass and family socio-demographic characteristics.

**Methods**
The sample was composed by 294 children between 5-9 years old ($M \pm SD = 7.35 \pm 1.18$ years old, 147 female) of the 10 elementary schools from the "Agrupamento de Escolas de Montemor-o-Velho (AEMMV)" (Coimbra-Portugal). Data was collected from September to December 2017. Family socio-demographic characteristics data were collected using a survey questionnaire applied to parents of participating children. Weight was evaluated using a Tanita Body Composition Monitor (model BC-420 SMA). Height was calculated using a stadiometer. Body Mass Index (BMI) was calculated using the formula

$$ \text{BMI} = \frac{\text{Weight (kg)}}{\text{Height (m)^2}} $$

The definition of overweight (level 1), normal weight (level 2), overweight (level 3) and obesity (level 4) was based on the BMI levels in use by the Portuguese Directorate-General for Health [5], which correlates BMI with percentile tables. Data analysis was conducted using IBM SPSS (version 24.0, Chicago, USA) and a statistical significance of 10.0% was defined.

**Results**
Results of this study show that 17.7% of the evaluated children are overweight and 16.3% are obese (34.0% are overweight/obese). No significant statistical differences were observed by gender (Mann-Whitney = 10416; p = 0.529) or by age (Kruskal-Wallis test = 4.01; p = 0.405). Results of Spearman correlation test (r) also evidence not existing significant statistical relations between levels of body mass and parents’ age (mother: $r = -0.031$; p = 0.608; father: $r = 0.015$; p = 0.797) or with household composition ($r = -0.040$; p = 0.499). However, a negative correlation exists between body mass levels and parents’ education (mother: $r = -0.136$, p = 0.019; father: $r = -0.158$, p = 0.006) evidencing that the higher the level of education of the parents the lower the prevalence of high levels of body mass (overweight/obesity).

**Conclusions**
Despite policies to tackle obesity are being implemented, results of this study show a high prevalence of overweight/obesity children’s in the AEMMV. Results also confirm that parents’ education is a strong social health determinant [1]. This study suggests that public authorities need to implement more efficient programs (e.g. nutrition and physical activity) at schools and community to promote active and healthier lifestyles.

**Acknowledgements**
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**References**

Keywords
Body Mass Index, Education, Health, Obesity, Overweight.

O136
Relationship between the -1562 C/T polymorphism in the MMP-9 gene and multiple sclerosis
Ana Valado1, Maria J Leitão2, Lívia Sousa3, Inês Baldeiras4
1Departamento de Ciências Biomédicas Laboratoriais, Escola Superior de Tecnologia da Saúde de Coimbra, Instituto Politécnico de Coimbra, 3046-854 Coimbra, Portugal; 2Centro de Neurociências e Biologia Celular, 3004-504 Coimbra, Portugal; 3Serviço de Neurologia, Centro Hospitalar e Universitário de Coimbra, 3000-075 Coimbra, Portugal; 4Faculdade de Medicina, Universidade de Coimbra, 3004-504 Coimbra, Portugal

Correspondence: Ana Valado (valado@estecoimbra.pt)

BMC Health Services Research 2018, 18(Suppl 2):O136

Background
Matrix metalloproteinases (MMPs), particularly MMP-9, have showed an association with the influx of inflammatory cells into the CNS, disruption of the blood brain barrier and demyelination in Multiple Sclerosis (MS). The transcriptional activity of the MMP-9 gene is influenced by the -1562 C/T polymorphism in the promoter region of the gene, and the T allele has been suggested as a genetic risk factor for MS.

Objective
To investigate the presence of the -1562 C/T polymorphism in the MMP-9 gene in healthy controls and MS patients and its association with clinical course of the disease.

Methods
Whole blood DNA was extracted from 169 patients (143 RRMS, 20 SPMS, 6 PPMS) and 186 controls, and the presence of the polymorphism was detected by PCR-RFLP. Quantification of MMP-9 was performed in 96 patients and 63 controls by ELISA. Data from patients was analysed for associations between the polymorphism distribution and clinical factors (gender, age at onset, disease duration, EDSS score and disease course).

Results
The -1562 T allele was present in 39 patients and 41 controls, with no significant difference between groups (p = 0.533). However, in MS patients, but not in controls, more women presented with the -1562 T allele than men (p = 0.014). In patients, the distribution of the polymorphism was not significantly associated with age at onset (p = 0.759), disease duration (p = 0.309), progression of the disease (p = 0.121) or disability status (p = 0.180). The levels of MMP-9 in serum were significantly higher in MS patients compared to controls (p = 0.001). There was also an increase in serum MMP-9 values in controls that carried the T allele (p = 0.003), but not in MS patients.

Conclusions
The -1562 C/T polymorphism, at least in our population, does not seem to be a susceptibility risk factor for MS. However, in patients, there seems to be an association between the T allele with the female gender.

Keywords
-1562C/T polymorphism, MMP-9, MS.

O137
Falls prevention in older people living in nursing homes in Northern Portugal
Isabel Lage, Odete Araújo, Manuela Almendra, Fátima Braga, Rui Novais
School of Nursing, University of Minho, 4704-553 Braga, Portugal

Correspondence: Odete Araújo (odete.araujo@ese.uminho.pt)

BMC Health Services Research 2018, 18(Suppl 2):O137

Background
Falls in older people are the leading cause of injury-related mortality and morbidity. People aged 65 and older have the highest risk of falling, with 30% of people older than 65 [1]. A fall can have significant adverse outcomes including injury, hospitalization and admission to long term care, development of fear of falling, activity restrictions and social isolation [2, 3].

Objective
The aim of this study was to describe the risk of falling in older people living in nursing homes in northern Portugal.

Methods
A descriptive correlational study was conducted in this research. A total of 833 participants (mean age 83 years) were recruited from 14 nursing homes in Northern Portugal. The statistical analysis of the data was performed using Statistical Package for Social Sciences (SPSS®) version 22.0, with descriptive and inferential statistical analysis with a significance level of 0.05.

Results
The results showed that the older men have less probability of falling in comparison with older women (OR = 0.581). In addition, older people able to walk independently and talk also have less probability of falling (OR = 0.431, OR = 0.360). In opposition, older people with walking difficulties or using technical aids have high risk of falling (OR = 1.944 e OR = 1.518).

Conclusions
These findings support the idea that ongoing assessment could be more important than the admission assessment, in identifying risk factors for falls in older people after institutionalization, in order to prevent falls.

References

Keywords
Falls, Older people, Nursing homes.

O138
"+ COOLuna” – intervention program of physiotherapy in schools at A Ceus Baixo Vouga
Vítor Ferreira1,2, Ana Oliveira1, Maritza Neto1, Marta Santo1
1Agrupamento de Centros de Saúde do Baixo Vouga, 3800-159 Aveiro, Portugal; 2School of Health, University of Aveiro, 3810-193 Aveiro, Portugal

Correspondence: Vítor Ferreira (vitorfontesferreira@gmail.com)

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Background
Musculoskeletal pain in children is one of the most common reasons to seek medical attention. The most common musculoskeletal pain conditions are nonspecific or idiopathic and include regional pain in the spine, with a high prevalence [1]. Multifactorial causes are indicated, like social, psychological, physiological and environmental factors [2, 3]. Within the environmental factors, the carriage of schoolbags is pointed out as a factor that contributes to the high prevalence of musculoskeletal pain [3-5]. However, some studies report that the weight of schoolbags has little influence on the perception of pain, mainly in the spine [6, 7]. Nevertheless, musculoskeletal pain in childhood can persist throughout adolescence and increases the risk of experiencing chronic pain in adulthood [8-10]. At this phase, adolescents undergo a period of accelerated muscle-skeletal growth and development, with spinal structures being sensitive to external aggressions [11].
Objective
The aim of this study was to evaluate musculoskeletal pain due to schoolbag carriage in terms of prevalence, intensity and predisposing risks factors in students of 5th grade in schools of the range of community health centres of Aveiro region, during the school year of 2016-2017.

Methods
A cross-sectional study was design. The presence, intensity and duration of pain was assessed using a body chart and numeric rating scale for pain. Predisposing risk factors was assessed by means of an ad hoc questionnaire.

Results
A total of 960 children (male 51.1%; female 48.6%) with a mean age of 10.4 years (± 7.6) were included. The majority had backpacs (96.6%) and 82.4% (n = 775) carried the backpack over 2 shoulders. The mean schoolbag weight (4.9 ± 1.3 kg) represented a mean % body weight (%BW) of 13.0% (± 4.8). Only 29.3% carried schoolbags (96.6%) and 82.4% (n = 775) carried the backpack over 2 shoulders. The majority (79.9%) carried schoolbags to school for ≤ 15 min. The prevalence of musculoskeletal pain was reasonable (37.8%), and in the region of spine was low (16.0%). Multiple linear regression model indicated that pain is only explained by the number of hours of physical activity (negative correlation: r = -0.367) in 12.4% (R² = 0.124; p = 0.001, SEE = 0.143).

Conclusions
This study highlights the need to consider the multifactorial nature of musculoskeletal pain in children, and also the need to reinforce protective factor of physical exercise in future prevention programs dedicated to children.

References
1. Swain MS, Henschke N, Kamper SJ, Cobina I, Ottova-Jordan V, Maher CG. That were ≤ body weight (%BW) of 13.0% (± 4.8). Only 29.3% carried schoolbags (96.6%) and 82.4% (n = 775) carried the backpack over 2 shoulders.

Keywords
Physiotherapy, Schoolbags, Musculoskeletal pain, Children.

O139
Looking over Portuguese school-aged children lifestyles: results from a pilot study
Goreti Marques, Ana R Pinheiro, Fátima Ferreira, Daniela Simões, Sara Pinto
Escola Superior de Saúde de Santa Maria, 4049-024 Porto, Portugal
Correspondence: Goreti Marques (goreti.marques@santamariaesaude.pt)
BMC Health Services Research 2018; 18(Suppl 2):O139

Background
Childhood obesity is considered one of the new epidemics of the 21st century. This study is part of a largest project regarding the improvement of healthy lifestyles in school-aged children, through a transdisciplinary team.

Objective
To describe food consumption and sport activities of Portuguese school-aged children.

Methods
An exploratory/descriptive pilot-study was conducted with third grade school-aged students from two Portuguese primary schools. Data were collected during through a self-filling form focusing on socio-demographic variables, sport activities and anthropometric measures (sex, age, house hold composition, practice of at least 60 minutes/week of sport activities outside school, weight, height). A booklet was used during five consecutive days to register food consumption. The study was previously approved by an Ethics Committee, and by the National Data Protection Commission (NDPC no.1704/2015). The informed consent of the child’s legal representative was signed. Data were analysed using the SPSS®-version 24.0.

Results
Preliminary results included 109 school-aged children (mean age = 7.5 years old; mean weight = 28.50 kg; mean height = 131.60 cm). Regarding the Body Mass Index (BMI), 65.1% of the children were considered to have normal weight, 11.9% overweight, and 8.3% obesity; underweight emerged in 14.7% of children. The consumption of fruit/vegetables was significantly greater (p < 0.05) in underweight children when compared with normal weight and overweight/obese children. The average consumption of fat/oil, and sugary/salty products seemed smaller in underweight and overweight/obese children, while the consumption of dairies/meat/fish/eggs, cereals and their derivatives, tubers and water seemed similar; however, statistically significant differences were not found (p > 0.05). Most children (77.1%) performed at least 60 minutes/week of sport activities outside school (66.7% practice only one type, 25.0% practice two, and 8.3% practice three different sports per week). Food consumption was not significantly different between children that practiced at least 60 min/week of sports outside school comparing to the children who didn’t.

Conclusions
Though most children have normal weight, data show important abnormalities in BMI. The consumption of fruit/vegetables appears to be increased in underweight children and decreased in overweight/obese children, which highlights the need for more detailed research. Food consumption does not seem to differ depending on the practice of outside-school sports. Further stages must bring the development of a transdisciplinary healthcare program to improve healthy lifestyles among school-aged children.

Acknowledgements
This work was funded by project NORTE-01-0145-FEDER-024116.
Keywords
Childhood obesity, Food consumption, Sport activities, Health promotion.

O140
Dating violence in university context: practices, beliefs and impacts on the health of victims
Sofia Neves1, Ana Sousa, Joana Topa, Janete Borges
1Instituto Universitário da Maia, Maia, Portugal; 2Centro Interdisciplinar de Estudos de Género, Instituto Superior de Ciências Sociais e Políticas, Universidade de Lisboa, Portugal

Correspondence: Sofia Neves (asneves@ismai.pt)
BMC Health Services Research 2018, 18(Suppl 2):O140

Background
Dating violence is an obvious and worrying social and health problem with serious consequences for its victims. It is characterized as a pattern of coercive and abusive tactics employed by one partner in a relationship to gain power and control over the other partner. It can take many forms, including physical violence, coercion, threats, intimidation, isolation, and emotional, sexual or economic abuse and occurs in the context of intimate heterosexual or homosexual/lesbian relationships. This kind of violence seems to be supported on conservative and traditional gender norms and stereotypes.

Objective
The main objective of this study is to characterize university students’ beliefs and practices regarding dating violence, identifying the impacts of this type of violence on the psychological, physical, sexual and social health of their victims.

Methods
We used self-administered questionnaires and a socio-demographic survey for data collection: Gender Belief Inventory (Maia University Institute and Interdisciplinary Centre for Gender Studies, version for research, 2017) and the Inventory on Violent Youth Relations (University Institute of Maia and Interdisciplinary Centre for Gender Studies, version for research, 2017). These were applied to 200 university students (142 females and 55 males), aged 18-44 (M = 20.54; SD = 4.435) who were attending the Maia University Institute. Data analysis was performed using the statistical program IBM- Statistics Package for the Social Sciences (version 24).

Results
The results showed that 12.8% of students reported having been victims of some act of violence by someone with whom they maintain or maintained a relationship of intimacy. Men were identified as the main perpetrators, with women having the highest rates of victimization. With regard to the type of violence perpetuated, psychological and social violence appear as the most experienced by students. With regard to gender social beliefs, this study reveals that these students maintain conservative and traditional gender beliefs that continue to perpetuate violence. Regarding the impact of dating violence, there was awareness among respondents of the implications of this violence on the health of the victims.

Conclusions
This study shows that despite the efforts that have been made in the implementation of policies and projects to prevent gender violence, this has not been enough to finish its practice. The commitment to the implementation of gender equality programs in school education seems fundamental in order to prevent this public health problem.

Keywords
Dating Violence, University Students, Beliefs, Practices, Implications to health.
Conclusions
The completion of this step allowed progressing in the design and implementation of the cost model, which, in turn, will support value measurement, and enhancing of the focus LTH unit. Besides, all involved professionals stated that their engagement in this phase of the project generated exceptional opportunities for interdisciplinary meetings and debate, contributing to closer ties between different areas of LTH.

References

Keywords
Long-term healthcare, Time-Driven Activity Based Costing (TDABC), Clinical conditions, Patient-centered data, patient complexity.

O142
Effects of aerobic land-based and water-based exercise training programs on clinical and functional parameters in older women
Rafael Oliveira 1, Carlos T Santamarinha 3, João Gomes 3
1Research Unit in Quality of Life, Sport Sciences School of Rio Maior, Polytechnic of Santarém, 2400-413 Rio Maior, Portugal; 2Research Center in Sports Sciences, Health Sciences and Human Development, 6201-001 Covilhã, Portugal; 3City Hall of Esposende, 4740-223 Esposende, Portugal
Correspondence: Rafael Oliveira (rafaeloliveira@esdmlipsantararem.pt)
BMC Health Services Research 2018, 18(Suppl 2):O142

Background
In Portugal, most exercise training programs are offered by municipality of Esposende, for clinical and functional parameters in older women. Groups of land-based exercise, at least twice a week, seem to lead to better results. The study supports the role of physical exercise to improve hemodynamic, lipid profile and functional capacities, as reported previously by another similar study [4]. In addition, this study also revealed efficiency to improve clinical parameters that were not studied yet.

Conclusions
The results showed a positive effect in all exercise training programs offered by municipality of Esposende, for clinical and functional parameters in older women. Groups of land-based exercise, at least twice a week, seem to lead to better results. The study supports the role of physical exercise to improve hemodynamic, lipid profile and functional capacities as reported previously by another similar study [4]. In addition, this study also revealed efficiency to improve clinical parameters that were not studied yet.

References

Keywords
Older women, Water-based exercise, Land-based exercise, Functional capacities, Clinical parameters s.

O143
The influence of emotional intelligence in stigmatizing attitudes toward mental illness of undergraduate nursing students
Ana Querido 1,2, Catarina Tomás 1,2, Daniel Carvalho 1,2, Marina Cordeiro 1,2, João Gomes 3
1School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3Santo André Hospital, Hospital Center of Leiria, 2410-197 Leiria, Portugal
Correspondence: Ana Querido (ana.querido@ipleiria.pt)
BMC Health Services Research 2018, 18(Suppl 2):O143

Background
Health care professionals share the general public’s attitude towards people with mental illness, being generalized the harmful beliefs and the subsequent negative attitudes to these patients [1]. A significant correlation between emotional intelligence and mental illness stigma has been found.

Objective
To analyse the correlation between emotional intelligence and stigmatizing attitudes towards mental illness and to access the influence of this intelligence in those stigmatizing attitudes, among undergraduate nursing students.

Methods
It was performed a cross-sectional correlational study. Data was collected from a non-probabilistic sample of nursing students from a health school of the centre region of Portugal, using a questionnaire with sociodemographic questions, the Wong and Low Emotional Intelligence Scale (1-5) [2] and the Community Attitudes Toward the Mentally Ill Scale (40-200) [3]. Ethical procedures were taken into account during research according the Helsinki Declaration.

Results
After nine months of intervention, the main results were at fast: glycemia (GA=116.0±12.11 vs 101.50±13.36 mg/dL; GC= 120.43±15.34 vs 100.47±11.65 mg/dL; GD = 127.29±36.60 vs. 111.23±29.18 mg/dL); triglycerides (GA= 288.13±136.78 vs 158.13±74.24 mg/dL; GC= 295.94±112.92 vs 153.63±101.96 mg/dL; GD= 244.79±122.41 vs 144.98±69.27 mg/dL); FCR (GD = 71.34±11.26 vs 66.31±8.68 bpm); aerobic capacity (GB=541.88±51.03 vs 605.0±31.12 m; GD=127.29±74.06 vs. 111.23±131.65 m, in resistance of lower limbs (GA=16.57±5.19 vs 18.90±5.07 repetitions; GB=14.89±5.21 vs 19.11±4.83 repetitions; GD=20.54±5.38 vs 22.87±6.39 repetitions) and agility (GA= 7.94±3.52 vs 8.82±2.91 seconds; GB=8.8±6.49 vs 6.53±2.40 seconds; GD=7.90±4.56 vs 6.81±3.78 seconds; GD=6.13±1.66 vs 5.48±1.87 seconds), p < 0.05 for all. Also, it was observed that there were correlations between aerobic capacity and triglycerides; fast glucose and triglycerides.

Conclusions
The results showed a positive effect in all exercise training programs offered by municipality of Esposende, for clinical and functional parameters in older women. Groups of land-based exercise, at least twice a week, seem to lead to better results. The study supports the role of physical exercise to improve hemodynamic, lipid profile and functional capacities as reported previously by another similar study [4]. In addition, this study also revealed efficiency to improve clinical parameters that were not studied yet.

References
Results
Most of the nursing students inquired (N=335) were female (N=263). The sample had an average age of 21.69 years (SD=4.64), distributed by all levels of nursing graduation. Some (n=25) had already suffered from mental illness, mainly (N=17) humour disorders, and 41.2% referred to have regular contact with mental health patients in their lives. These nursing students showed a good emotional intelligence (Mean=3.62; SD=0.41), being higher in self-emotional appraisal (Mean=3.73; SD=0.58) and others’ emotional appraisal (Mean=3.85; SD=0.49). Stigmatizing attitudes towards mental illness are low (Mean=122.15; SD=5.02), being more intense in authoritarianism (Mean=23.92; SD=4.44) and social restrictiveness (Mean=20.87; SD=4.94). Emotional intelligence is positively correlated with attitudes in community mental health ideology (R=0.133; p=0.015).

Other’s emotional appraisal ability of emotional intelligence is correlated with attitudes regarding benevolence (R=0.226; p=0.000), community mental health ideology (R=0.221; p=0.000), and social restrictiveness (R=0.254; p=0.000).

Regulation of emotions also influences benevolence attitudes (R²=0.016; F=16.578; p=0.000).

Conclusions
Postgraduate nursing students have good emotional intelligence and low stigmatizing attitudes towards mental illness. A significant correlation was found between emotional intelligence and stigmatizing attitudes, mostly positive, and an influence of this type of intelligence in the four areas of this kind of attitudes. These results enhance the importance of developing emotional intelligence, specially the ability of other’s emotional appraisal, in a way to improve attitudes toward mental illness.

References

Keywords
Mental health, Stigma, Nurse students, Emotional intelligence.

O144
Functional decline in older acute medical in-patients
Cecília Rodrigues1, Denisa Mendonça2, Maria M Martins3
1Centro Hospitalar do Porto, 4099-001 Porto, Portugal; 2Instituto de Ciências Biomédicas Abel Salazar, 4050-313 Porto, Portugal; 3Escola Superior de Enfermagem do Porto, 4200-072 Porto, Portugal
Correspondence: Cecília Rodrigues (ceciliarodrigues@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O144

Background
Older patients hospitalised for acute illness are vulnerable to decline in basic self-care. This functional decline determines future health needs and can lead to negative health outcomes.

Objective
The aim of this study was to compare basic self-care needs in older acute medical in-patients between 2 weeks before hospitalization and discharge.

Methods
Single-centred, observational, and prospective cohort study. Data were collected between May and September 2017 and included 91 patients, aged 65 or older admitted to a medical ward of a 580-bed teaching hospital in Portugal. Performance in basic activities of daily living (BADL) at home (self-reported), at hospital admission (observed) and at discharge (observed) was collected. Functional status of the elderly patients at 2 weeks before hospitalization (baseline), at hospital admission, and at discharge was measured by the Katz Index. Differences in scores for BADL between baseline and admission, between admission and discharge, and between baseline and discharge were used to define pre-admission, in-hospital and overall functional decline.

Results
Pre-admission, in-hospital and overall functional decline occurred in 78.0%, 4.4% and 63.7% of the patients, respectively. Patients were independent on average in 3.63, 1.41 and 1.90 BADL 2 weeks before admission, at hospital admission and at discharge, respectively. In-hospital functional improvement occurred in 36.3% of the patients.

Conclusions
Due to their attitude to observe, support and guide patients and their 24 hours patient supervision, nurses play a key role in strategies to prevent functional decline in older patients. An adequate planning of nursing care that includes interventions to promote and maintain mobility, in the logic of self-care, can be a valuable contribution in the prevention of functional decline and in the reconstruction of independence in self-care, after a generative event of dependence.

Keywords
Functional decline, Elderly, Hospital outcomes.

O145
Validation of the Weight Focused Feelings Scale in a sample of overweight and obese women participating in a community-based weight management programme
Cristiana Duarte1, Marcela Matos2, James Stubbs1, Corinne Gale1, Liam Morris4, Paul Gilbert1,5
1School of Psychology, Faculty of Medicine and Health, University of Leeds, LS2 9JT, Leeds, United Kingdom; 2Cognitive and Behavioural Centre for Research and Intervention, University of Coimbra, 3001-802 Coimbra, Portugal; 3College of Life and Natural Sciences, University of Derby, Kedleston Road, DE22 1GB, Derby, United Kingdom; 4Nutrition and Research Department, Slimming World, Clover Nook Road, DE5 4RF, Derbyshire, United Kingdom; 5Mental Health Research Unit, Kingsway Hospital, DE22 3LZ, Derby, United Kingdom
Correspondence: Cristiana Duarte (cduarte@leeds.ac.uk)
BMC Health Services Research 2018, 18(Suppl 2):O145

Background
A significant body of literature suggests that negative emotions may undermine self-regulation of eating behaviour during/subsequent to weight loss attempts by influencing loss of control of eating behaviour [1]. Negative feelings related to body weight and shape seem to play a role in eating problems, with some studies suggesting that binge eating may occur as a means of momentarily avoiding/reducing negative affects related to body weight and shape [2, 3]. Recent evidence suggests that positive emotions may also relate to overeating in healthy and obese adults [4-6]. Nonetheless, research on emotions and eating focuses primarily on negative emotions and there is a lack of measuring relating positive emotions to eating.

Objective
The current study aimed to test the factorial structure and psychometric properties of the Weight Focused Feelings Scale (WFFS), an 11-item measure that assesses negative and positive feelings linked to body weight and shape.

Methods
2,236 women attending a community-based weight management programme participated in this study. Mean (SD) participants age was 41.71 (12.34) years and BMI was 31.62 (6.10) kg/m². Data was randomly split in two independent data sets to conduct an Exploratory Factor Analysis (EFA) in 1,088 participants, and a Confirmatory Factor Analysis (CFA), in 1,148 participants.

Results
The EFA indicated a two-factor structure: negative feelings (7 items) and positive feelings (3 items). Items presented factorial
The correct identification of the person under health care in an institution is a basic principle of a patient safety culture and quality of care provided. Failures associated with patient identification processes are the cause of medication errors, transfusions, complementary diagnostic and therapeutic screenings, invasive procedures performed on wrong persons, and other incidents of high severity.

**O147**

**Nursing, Evidence-Based Practice, Barriers, Hospital health care.**

**Patient identification, patient safety and clinical audit**

Cecília Rodrigues, Manuel Valente

Centro Hospitalar do Porto, 4099-001 Porto, Portugal

**Correspondence:** Cecília Rodrigues (cecliarodrigues@gmail.com)

**BMC Health Services Research 2018, 18(Suppl 2):O147**

**Background**

The correct identification of the person under health care in an institution is a basic principle of a patient safety culture and quality of care provided. Failures associated with patient identification processes are the cause of medication errors, transfusions, complementary diagnostic and therapeutic screenings, invasive procedures performed on wrong persons, and other incidents of high severity.

**Keywords**

Evidenced-based practice, barriers, hospital health care.
Objective
Identify if all hospitalized patients have identification wristbands and check if the name is correct and readable.

Methods
In a 580-bed adult teaching hospital, between January and December 2017, on random days of each month, patients were audited for identification by wristband by a team of nurses with experience in clinical audit.

Results
In the 12 months studied, 161 audits were performed, resulting in 3,539 patients audited. From the total patients audited, 3,406 (96.2%) were correctly identified with wristbands. There were 133 failures: 113 patients had no identification wristband, 19 patients had an identification wristband, but the name was unreadable and 1 patient had a wristband with the wrong name. The rate of correctly identified patients increased progressively over the months: in the first month (January 2017) 89.3% of patients were correctly identified with a wristband; in December 2017, the rate of correctly identified patients was 95.0%. The partial results of this audit were disclosed in general risk management meetings with clinical services in March, June and September 2017.

Conclusions
Given the potential negative implications of the absence of identification of the person undergoing health care, these results indicate that there is a clear opportunity for improvement in patient identification. Clinical audit has proved to be an instrument for improving quality and safety, particularly in improving the identification of patients.

Keywords
Patient safety, Patient identification, Clinical audit.

O149
Healthy lifestyles & literacy for health in work context- what trend?
Otilia Freitas 1,2, Gregório Freitas 3, Clementina Morna 1,2, Isabel Silva 1,2, Gilberta Sousa 1,2, Rita Vascorcelos 4, Luís Saboga-Nunes 4, Estudantes Enfermagem 1
1Center for Health Technology and Services Research, University of Madeira, 9020-105 Funchal, Madeira, Portugal; 2Higher School of Health, 9020-105 Funchal, Madeira, Portugal; 3Faculty of Exact Sciences and Technology, University of Madeira, 9020-105 Funchal, Madeira, Portugal; 4Institute of Environmental Health, Faculty of Medicine, University of Lisbon, 1649-028 Lisboa, Portugal; 5Institute of Sociology, University of Freiburg, 79098 Freiburg, Germany

Background
In the National Plan for Occupational Health (PNSO) - 2nd Cycle 2013/2017, goals are established to increase health gains and guarantee the value of the workers’ health in groups of employers by those responsible for governance and society in general. One of the specific objectives is to promote health and work practices and healthy lifestyles at the workplace, concerning private sector companies and Public Administration [1].

Objective
To describe health lifestyles and health literacy of workers of a company of the tertiary sector of Região Autónoma da Madeira, Portugal.

Methods
Descriptive exploratory study, with a non-probabilistic convenience sample of 118 workers, with mean age of 45 years, predominantly male (88.1%). We used a sociodemographic data collection instrument, the FANTASTIC Lifestyle Questionnaire [2] (αC 0.725) and the European Questionnaire on Literacy for Health, Portuguese version [3], (αC of 0.97). A favourable opinion was obtained from an ethics committee and the ethical procedures inherent to this type of study were respected.

Results
It was found that 11.9% of the respondents presented a general level of Good (73 to 86), 55.9% of Very Good (85 to 102) and 32.2% of Excellent (103 to 120) lifestyle. Regarding general health literacy, 56.7% of the respondents had limited literacy levels, being 7.2% inadequate and 49.50% problematic. The trend towards limited literacy, observed in general literacy, remained in all three domains. Thus, in the area of Health Care, 48.3% of the respondents had limited levels of literacy, being 8.47% inadequate and 39.83% problematic. Concerning disease prevention, 44.06% of the respondents showed limited levels of literacy, being 11.86% inadequate and 32.20% problematic. In terms of health promotion, 47.46% of the respondents showed limited levels of literacy, being 11.02% inadequate and 36.44% problematic. There is a positive (p = 0.277) and statistically
significant correlation between the general lifestyle score and the overall health literacy score (p value = 0.002).

Conclusions
The results suggest the importance of an intervention with integrated activities and promoters of healthy lifestyles and of health literacy, focusing strategically on health education in the work context, aiming to raise awareness among the target population.

References

Keywords
Healthy lifestyles, Health literacy, Work context, Nursing.

O150
3rd pressure ulcer prevalence study in community setting - CSAH-USIT
Manuela Dias, Ana Rocha
Unidade de Saúde da Ilha Terceira, Centro de Saúde de Angra do Heroísmo, 9700-121, Açores, Portugal
Correspondence: Manuela Dias (maria.mm.dias@azores.gov.pt)
BMCHSR 2018, 18(Suppl 2):O150

Background
Pressure ulcers are a problem to health care institutions and professionals. In Açores Islands, there are few prevalence studies in community settings and the results point to prevalence rates of 18.5%, according to the Nursing Scientific Investigation Group (ICE) [1] in 2006, and of 26.49% according to Rodrigues and Soriano [2], in 2010. The National Security Patient Plan 2015-2020 [3] recommends that all health institutions should supervise this problem every six month, so “Gabinete de Saúde Comunitária” is already conducting the 3rd Pressure Ulcer Prevention Study.

Objective
This study aims to examine the prevalence rate of pressure ulcers in patients living at home, to characterize those patients as well as the most severe ulcers.

Methods
This was a descriptive cross-sectional study using a quantitative approach with a questionnaire, which took place during November’s first week, in 2017. The population was the one attending Angra Health Centre, assisted by nurses, in a community setting. Data was analysed using Excel 2007. The study was performed after the Health Centre’s approval. A sample of 26 patients, with pressure ulcers, 54% female, with a medium age of 79.09 years participated in the study. Most of the patients (46.15%) belonged to the age group between 80-89 years.

Results
The study reported a prevalence rate of 7.58%. There was a ratio of pressure ulcers per participant with pressure ulcer of 1.5, where the sacrum/coccyx was the main critical area. Most of the pressure ulcers recorded was category II (42.31%), with an evolution situated on 4.42 months. 77% had high risk of pressure ulcer development according to the Braden Scale; 92.31% of the patients had prevention devices on bed and only 31.25% had them on sitting chairs. Upon analysis of the three studies, we noticed that the prevalence rate had increased, the medium age decreased, with the largest group belonging to the group between 80-89 years old. There was also an increased number of the sacrum/coccyx localization in this group.

Conclusions
This study allowed us to analyse, briefly, the pressure ulcer context, in which nurses spend a large amount of time caring and showing some strategies for recovery. Targeting those findings should be implemented in some of these community settings, in order to improve the health quality of the patient.

References

Keywords
Pressure Ulcer, Prevalence, Community settings, Nursing.

O151
Relationship between health literacy, electronic health literacy and knowledge of sexually transmitted diseases in workers of a Portuguese hospital
Alice Gonçalves1, Anabela Martins2, Clara Rocha3, Diana Martins1,4, Isabel Andrade1, Margarida Martins3, Paula Vidas5, Paulo Polónio6, Fernando Mendes1,8,10
1Biomedical Laboratory Sciences, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal; 2Department of Physiotherapy, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal; 3Department of Complementary Sciences, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal; 4Institute for Research and Innovation in Health Sciences, University of Porto, 4200-135 Porto, Portugal; 5Emergency Service, Hospital Distrital da Figueira da Foz, 3004-001 Figueira da Foz, Portugal; 6Cardiology Service, Hospital Distrital da Figueira da Foz, 3004-001 Figueira da Foz, Portugal; 7Laboratory Medicine Hospital; Hospital Distrital da Figueira da Foz, 3004-001 Figueira da Foz, Portugal; 8Biophysics Institute, Center for Neuroscience and Cell Biology-Institute for Biomedical Imaging and Life Sciences, Faculty of Medicine, University of Coimbra, 3004-504 Coimbra, Portugal; 9Center of Investigation in Environment, Genetics and Oncobiology, Faculty of Medicine, University of Coimbra, 3004-504 Coimbra, Portugal; 10Coimbra Institute for Clinical and Biomedical Research, University of Coimbra, 3094-001 Coimbra, Portugal

Correspondence: Alice Gonçalves (alicebv@gmail.com)
BMCHSR 2018, 18(Suppl 2):O151

Background
Health literacy (HL) can be defined as the individual capacity of obtaining and understanding information, making appropriate decisions about health. An adequate level of HL is fundamental for risk awareness and behaviour change, as well as for disease prevention. Electronic health literacy (eHL) can be useful in promoting health, but it demands the capacity of judgment towards the obtained information and the ability to work with new technologies. Due to the high prevalence of sexually transmitted diseases (STDs) in the general population, it’s important to evaluate and relate these health concepts.

Objective
To evaluate and relate levels of HL and eHL with STD knowledge of professionals of a Portuguese Hospital.

Methods
149 individuals from different professional categories, working at a medium size Portuguese Hospital, answered an anonymous questionnaire, composed of four parts: socio-demographic data, STDs knowledge, and the Portuguese version of both Newest Vital Sign (to assess the functional HL) and eHEALS (to assess the eHL).

Results
Altogether 66.0% of the sample had the possibility of an adequate HL. 59.3% of those individuals were health professionals and 76.3% had a high knowledge on STDs. 72.4% were female and 27.5% male, showing similar possibility of an adequate HL (66.7% and 61.0%,
respectively). Concerning the individuals with the possibility of an adequate level of HL, 27.5% were 31-40 years old and 90.6% held a higher education degree, while 7.3% had only completed high school. In general, “I know what health resources are available on the Internet” and “I have the skills I need to evaluate the health resources I find on the Internet” had the highest mean (3.99) and “I feel confident in using information from the Internet to make health decisions” had the lowest with 3.08.

Conclusions

Individuals with higher education, especially in health sciences, have higher probability of an adequate HL. Age may also be an interfering factor, since the youth nowadays, has more access to information early in life. Our results also show that 50% of the studied population had the possibility of an adequate level of HL and a high knowledge in STDs, which is an average percentage for people who work at this hospital. This can be changed, using specific education procedures, such as lectures or seminars, to increase HL and knowledge on STDs.

References


Keywords

Health literacy, eHealth literacy, Risk behaviour, Health professionals.

O152

Stigmatizing attitudes toward mental illness in future health professionals

Daniel Carvalho1, Catarina Tomás2, Ana Querido2, Marina Cordeiro2, João Gomes3

1Santo André Hospital, Hospital Center of Leiria, 2410-197 Leiria, Portugal; 2School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal

Correspondence: Daniel Carvalho (drcarvalho@gmail.com) BMC Health Services Research 2018, 18(Suppl 2):O152

Background

Health professionals, like nurses, still have concerns and negative attitudes towards people with mental illness, despite development of mental health services [1]. Final year students were found to be less stigmatizing [2], being important to pay special attention to the education of these professionals and on-the-job training [1].

Objective

To access the levels of stigmatizing attitudes towards mental illness, and to characterize the determinants of these attitudes, developed by health students.

Methods

A quantitative, cross-sectional correlational study was performed. A non-probabilistic sample of health students from a school in the centre region of Portugal was considered, and data was collected with a questionnaire with sociodemographic questions, a question about perception on their knowledge about mental health (scoring 0 to 5) and the Community Attitudes Toward the Mentally Ill Scale (scoring 40 to 200) [3]. Ethical procedures were taken into account during research, according to the Helsinki Declaration.

Results

The students inquired (N=636) were representative of five health degrees [3]. Dietetics, Nursing, Physiotherapy, Speech Therapy and Occupational Therapy, mostly female (82.1%), with an average age of 21.35 (SD=4.29; Median=20). A low percentage (6.6%) had already suffered from a psychiatric disease, mainly humour disorders (4.1%) and 37.6% had regular contact with a patient with mental illness in their lives. The sample had medium-low levels of stigmatizing attitudes towards mental illness (Mean=122.72; SD=5.19), being these negative attitudes more relevant in authoritarianism (Mean=24.17; SD=4.34) and social restriction (Mean=20.53; SD=4.93) areas. Male students showed more positive attitudes towards authoritarianism (p=0.004) and social restriction (p=0.007) and females towards Benevolence (p=0.016) and Community Mental Health Ideology (p=0.004). Nursing students had more frequent stigmatizing attitudes and physiotherapy students showed better attitudes (p=0.021). Students who have had mental illness had more stigmatizing attitudes in general (p=0.039), regarding all areas (p<0.005) except for Community Mental Health Ideology. Students who had regular contact with a mental health patient, had more stigmatizing attitudes in general (0.031) and in authoritarianism (p=0.039).

Conclusions

It was found medium-low levels of stigmatizing attitudes towards mental illness among the health students inquired. There was also evidence that having a mental disorder or having regular contact with mental health patients can increase stigmatizing attitudes of health students. This highlights the importance of intervention in these students, not also to improve attitudes towards mental health patients, but also to decrease the self-stigma that was also identified by these results.

References


Keywords

Mental health, Stigma, Health students, Attitudes.

O153

Psychological symptoms and mental health stigma in teaching professionals

Catarina Tomás1,2, Ana Querido1,2, Marina Cordeiro1,2, Daniel Carvalho1, João M Gomes3

1School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3Santo André Hospital, Hospital Center of Leiria, 2410-197 Leiria, Portugal

Correspondence: Catarina Tomás (catarina.tomás@ipleiria.pt) BMC Health Services Research 2018, 18(Suppl 2):O153

Background

Teaching professionals are recognised to be submitted to a daily stress, partly due to dynamic interactions associated with the teaching role, which leads to experiences of psychological and psychosomatic symptoms [1]. Facing mental health problems influences stigma towards mental illness. In this situation they are predisposed to accept preconceptions leading to internalized stigma [2]. Research has referred teachers as having negative attitudes towards mental illness [3]. Considering that there is little known about teacher professionals in secondary and higher education [4], this study addresses mental health stigma and psychological symptoms in these settings.

Objective

To characterise psychological symptoms and mental health stigma in teaching professionals; identify the differences between high-school and higher education teachers stigma; correlate psychological symptoms and mental health stigma.

Methods

Cross-sectional correlational study, with a non-probabilistic sample of 96 Portuguese teaching professionals. Data were collected using an on-line questionnaire composed by socio-demographic information, the Portuguese version of Brief Symptom Inventory (BSI) and he Attribution Questionnaire to Measure Mental Illness Stigma (AQ27) [5]. Ethical procedures were taken into account during research, according to the Helsinki Declaration.
Results
Teaching professionals were mostly women (70.8%), aged between 30 and 62 years old (Mean=44.8; SD=7.86), 27.1% diagnosed with a mental disease and 41.1% referred contact with mental health patients. Teaching professionals revealed low levels of global psychological symptoms. Higher scores were found in Obsession-Compulsion (M=0.88; SD=0.73). A moderate level of stigma was found in the global sample (M=3.63; SD=0.74). Stigmatizing helping attitudes and behaviour were higher (M=6.50, SD=1.86). Although no difference was found in total stigma between groups, higher education professors rate responsibility higher than high-school teachers (M=3.06, SD=1.08 vs M=2.55, SD=0.97; p<0.02). Significant positive correlations were found between total stigma and psychological symptoms in Somatization, Obsession-Compulsion, Interpersonal Sensitivity, Depression, Anxiety and Psychoticism (p < 0.01).

Conclusions
Teaching professionals experience low intensity of several psychological symptoms, and reveal medium stigma towards mental illness. Higher scores revealed higher psychological distress compared to higher education professors but no differences were found in stigma. The higher the psychological distress, the higher the stigma is expected to be towards people with mental illness. Therefore intervention towards mental health is needed, addressing psychological distress in order to minimize mental health stigma.

References

Keywords
Mental health, Psychological symptoms, Stigma, Teaching professionals.
Methods

To evaluate sleep disorders and related factors in perimenopausal women, we consider a study framework proposed by Meleis and Schumacher, which attributes direct relationships to the menopausal transition. Based on the conceptual framework, it has been difficult to establish comparisons. In middle-aged women, sleep disorders are quite prevalent problems and are sometimes attributed directly to the menopausal transition. Based on the conceptual framework, we consider that recent changes in the sleep pattern are an indicator of the transition process, assuming that they can interfere with quality of life, and that we can try to identify the conditions/factors associated with this change.

Objective

To evaluate sleep disorders and related factors in perimenopausal women.

Methods

This was a cross-sectional study, correlational, with a non-probabilistic convenience sample, in which 600 Portuguese perimenopausal women (45–55 years) were requested to complete: the Menopause Rating Scale (MRS), Scale of attitudes and beliefs about menopause and the Satisfaction Scale Social Support; Self-Esteem Scale. Semi-structured interviews collected: socio-demographic and socio-economic data; lifestyle data; psychological data - global health perception; stressful life events; perception of the recent change of body image; have live projects and data on health history. Physical examination included: blood collection for determination of follicle stimulating hormone (FSH) and estradiol (E2), weight, height, and abdominal measurements. Women signed informed consents after exclusion of the study objectives and after guaranteeing anonymity and confidentiality.

Results

In this study, 43.5% of the women reported having no problems with sleep; 18.2% light intensity problems; 10.2% moderate intensity and 28.2% very intense problems. In relation to the influence of the different factors included in the final model on the probability of a woman having reported uncomfortable sleep problems, the logistic regression analysis revealed that the conditions of socio-demographic and socioeconomic factors: level of education (βschooling education =0.933, X² Wald(1)=4.386, p=0.035, OR=2.222), the conditions of the psychosocial factor: attributed meaning to menopause (βpositive meaning=−0.504, X² Wald(1)=6.262; p=0.012; OR=0.604), satisfaction with social support (βfamilial support=−0.154, X² Wald(1)=10.849, p=0.001, OR=0.857), attitudes and beliefs regarding menopause (βphysical changes=−0.207, X² Wald(1)=10.634, p=0.001, OR=0.813), attitudes (βphysical changes=−0.130, X² Wald(1)=5.282; p=0.022; OR=0.878); have projects (βdo-nothing projects=−0.662, X² Wald(1)=9.907; p=0.002; OR=0.516) and the condition of the lifestyle factor: number feed (βnumber of feed=−0.285, X² Wald(1)=10.658, p<0.001, OR=0.752), presented a statistically significant effect, significant difference on the Logit of the probability of a woman having referred problems, according to the adjusted Logit model(G²(10)=173.916; p<0.001, OR=0.604, X² Wald(1)=5.252, p=0.021, R² =0.342, R² Full=0.218).

Conclusions

Paediatric self-medication is a common practice, especially based on old medical guidelines. No explanatory factors have been found for this paediatric self-medication.

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Keywords

Children, Pediatric medicines use, Pediatric self-medication, Preschool children, Primary school children.

O156
Sleep and perimenopause: contributions to its management

Arminda Pinheiro (aanes@ese.uminho.pt)

Higher School of Education, University of Minho, 4710-228 Braga, Portugal

BMC Health Services Research 2018, 18(Suppl 2):O156

Background

There are large geographical differences in the prevalence of menopausal symptoms. Given the differences in study methodologies, it has been difficult to establish comparisons. In middle-aged women, sleep disorders are quite prevalent problems and are sometimes attributed directly to the menopausal transition. Based on the conceptual framework, we consider that recent changes in the sleep pattern are an indicator of the transition process, assuming that they can interfere with quality of life, and that we can try to identify the conditions/factors associated with this change.

Objective

To evaluate sleep disorders and related factors in perimenopausal women.

Methods

This was a cross-sectional study, correlational, with a non-probabilistic convenience sample, in which 600 Portuguese perimenopausal women (45–55 years) were requested to complete: the Menopause Rating Scale (MRS), Scale of attitudes and beliefs about menopause and the Satisfaction Scale Social Support; Self-Esteem Scale. Semi-structured interviews collected: socio-demographic and socio-economic data; lifestyle data; psychological data - global health perception; stressful life events; perception of the recent change of body image; have live projects and data on health history. Physical examination included: blood collection for determination of follicle stimulating hormone (FSH) and estradiol (E2), weight, height, and abdominal measurements. Women signed informed consents after exclusion of the study objectives and after guaranteeing anonymity and confidentiality.

Results

In this study, 43.5% of the women reported having no problems with sleep; 18.2% light intensity problems; 10.2% moderate intensity and 28.2% very intense problems. In relation to the influence of the different factors included in the final model on the probability of a woman having reported uncomfortable sleep problems, the logistic regression analysis revealed that the conditions of socio-demographic and socioeconomic factors: level of education (βschooling education =0.933, X² Wald(1)=4.386, p=0.035, OR=2.222), the conditions of the psychosocial factor: attributed meaning to menopause (βpositive meaning=−0.504, X² Wald(1)=6.262; p=0.012; OR=0.604), satisfaction with social support (βfamilial support=−0.154, X² Wald(1)=10.849, p=0.001, OR=0.857), attitudes and beliefs regarding menopause (βphysical changes=−0.207, X² Wald(1)=10.634, p=0.001, OR=0.813), attitudes (βphysical changes=−0.130, X² Wald(1)=5.282; p=0.022; OR=0.878); have projects (βdo-nothing projects=−0.662, X² Wald(1)=9.907; p=0.002; OR=0.516) and the condition of the lifestyle factor: number feed (βnumber of feed=−0.285, X² Wald(1)=10.658, p<0.001, OR=0.752), presented a statistically significant effect, significant difference on the Logit of the probability of a woman having referred problems, according to the adjusted Logit model(G²(10)=173.916; p<0.001, OR=0.604, X² Wald(1)=5.252, p=0.021, R² =0.342, R² Full=0.218).

Conclusions

Problems with sleep can be considered a negative indicator of processes in perimenopausal women. The model suggests some modifiable factors, specifically: eating habits, attitudes, beliefs and meaning attributed to menopause, and importance of satisfaction with family social support. These aspects should be included in the initial nursing assessment and risk evaluation of women who cross this period, in the sense of adequately managing nursing interventions.

Keywords

Problems, Sleep, Menopause.

O157
Preschooler's executive and socio-emotional functioning: effects of two intervention programs- Psychomotor therapy and Creative Dance

Andreia Saramadinhia1, Catarina Pereirab1,2, Ana C Ferreirab1,2, Jorge Fernandes1,2,3, Guida Veigab1,2

1Department of Sports and Health, School of Science and Technology, University of Évora, 7000-671 Évora, Portugal; 2Research Center in Sports Sciences, Health Sciences and Human Development, University of Beira Interior, 6201-001 Covilhã, Portugal

Correspondence: Andreia Saramadinha (asaramadinha@gmail.com)

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Background

The preschool years represent a critical time period for the development of children's executive functioning and socio-emotional competences [1] and therefore it is the ideal period for the stimulation of these competencies [2, 3]. Interventions with children in preschool age should privilege spontaneity, creativity and play as a method of learning and stimulation [4, 5]. Psychomotor therapy and Creative Dance are two therapeutic approaches based on these principles [5, 6]. However, to date, no research has been done comparing the effects of Psychomotor therapy and Creative Dance.

Objective

The aim of this study was to examine the feasibility and the impact of two intervention programs, Psychomotor therapy versus Creative Dance, on the executive and socio-emotional functioning of preschool children.

Methods

Fifty preschool children (M = 4.04 years; SD = 0.67) were divided into two intervention groups and a control group. An experimental group participated in 24 Psychomotor therapy sessions, mainly involving sensorimotor activities and games with rules. The other experimental group participated in 24 Creative Dance sessions. The control group maintained daily life activities. Cold executive functions, hot executive functions, externalized and internalized behaviours and aggressiveness were evaluated.

Results

The intervention programs were well tolerated by pre-school aged children. No significant differences were found in terms of intra- and inter-observer comparisons, except in the control group (p < 0.05). Cold executive functions were negatively correlated to reactive aggressiveness (r = -0.408, p = 0.003).
Conclusions
The results suggest that both programs were feasible and well tolerated in this age group, but their benefits were not evident. Increased working memory was associated with decreased levels of reactive aggression. This study alerts to the need for further research focused on pre-schoolers’ executive and socio-emotional functioning, particularly on the effects of interventions programs.

References

Keywords
Executive functions, Mental health, Mind-body therapies, Psychomotor intervention.

O158
Impact of a 10 km race on inflammatory and cardiovascular markers: comparison between trained and untrained recreational adults
Margarida Carvalho¹, Andreia Noites², Daniel Moreira-Gonçalves³⁴, Rita Ferreira², Fernando Ribeiro²
¹Hospital de Santa Maria, 4049-025 Porto, Portugal; ²Department of Physiotherapy, School of Allied Health Technologies, Polytechnic Institute of Porto, 4200-072 Porto, Portugal; ³Research Center in Physical Activity, Health and Leisure, Faculty of Sport, University of Porto, 4200-450 Porto, Portugal; ⁴Department of Surgery and Physiology, Faculty of Medicine, University of Porto, 4200-450 Porto, Portugal; ⁵Mass Spectrometry Group, Department of Chemistry, University of Aveiro, 3810-193 Aveiro, Portugal; ⁶School of Health Sciences and Institute of Biomedicine, University of Aveiro, 3810-193 Aveiro, Portugal
Correspondence: Margarida Carvalho (margarida.carvalho.fr@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O158

Background
Previous studies have found that trained athletes had lower changes in circulating levels of inflammatory biomarkers and cardiovascular stress than untrained athletes, upon prolonged or exhausting exercise. Particularly, recreational runners with less training showed higher risk of cardiac injury and dysfunction after a marathon. Presently, we are observing a steadily growing number of young and older adults engaging in running events without having a professional orientation or training, emphasizing the need to assess biochemical markers that allow the evaluation of the acute changes imposed in these recreational athletes.

Objective
To compare the immediate and 24-hour effects of a 10-km run on inflammatory and cardiovascular biomarkers between recreational athletes, with and without specific running training.

Methods
18 recreational athletes (38.5 ± 14.5 years), 10 men and 8 women, were recruited and divided in a trained and untrained group. Venous blood samples were taken prior to the 10km race (48 hours before), immediately after (within 30 minutes), and 24 hours after the race. The following biomarkers were analysed by slot blotting assay: vascular endothelial growth factor (VEGF), interleukin 6 (IL-6), high sensitive C-reactive protein (hsCRP), ghrelin, matrix metalloproteinase-2 (MMP-2) and MMP-9.

Results
The trained group completed the race in 50.3 ± 13.0 minutes per comparison to the 66.8 ± 5.6 minutes of the untrained group (p = 0.003). A significant increase in circulating levels of hsCRP, ghrelin, VEGF and MMP-9 was observed immediately after the race in both groups; the levels of these biomarkers returned to baseline 24h post-race. A significant increase in IL-6 was also detected after the race in both groups, which returned to baseline levels at 24 hours post-race in the untrained group. Regarding MMP-2 levels, a significant increase was detected after the race only in the untrained that returned to baseline levels at 24 hours post-race.

Conclusions
The impact of a 10-km race in the inflammatory and cardiovascular markers assessed in this study was different between recreational athletes, with and without specific training.

Keywords
Biomarkers, Cardiovascular system, Exercise, Inflammation, Running.

O159
The health of the informal caregiver of dependent person in self-care
Maria A Dixe¹², Ana CS Cabecinhas³, Maura R Domingues³, Ana JCF Santos¹, Marina G Silva², Ana Querido¹²
¹Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; ²School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
Correspondence: Maria A Dixe (ana.querido@ipleiria.pt)
BMC Health Services Research 2018, 18(Suppl 2):O159

Background
Caring for a caregiver should be a constant concern and a responsibility of all health professionals, so that those who give care do not end up being uncared-for.

Objective
This correlational study had the following main aims: to assess the level and prevalence of burden of the informal caregiver of a person dependent in self-care; to determine the relationship between the levels of burden and the informal caregiver’s perception of their level of competence to be a caregiver.

Methods
Participants in this study were 33 informal caregivers of self-care dependent-persons in at least one activity of daily living, to whom a structured interview was performed at the time of hospital discharge. The interview included socio-demographic and professional data, perception of the informal caregiver on their level of competence to be a caregiver, and the Portuguese version of the Zarit Burden Interview [1]. This study was approved by the National Data Protection Commission and the ethics committee of the hospital where the study was conducted (n° 24/2017).

Results
The majority of dependent-persons were female (60.6%) with a mean age of 81.6 ± 11.3 years old, with the majority being dependent on all self-care activities. The mean age of caregivers was 61.4 ± 12.1 years old, mainly females. The family relationship was mostly a son/daughter (39.4%) or a spouse (33.3%), taking care of the patient on average at 63.9 ± 93 months. It was possible to verify that all caregivers had previous experience of caregiving to a family dependent. We also verified that the 33 caregivers presented a mean of 33.9 ± 15.8 on the emotional burden scale (maximum possible value of 110) which corresponds to little burden. We can also mention that 30.3% of the caregivers present no burden, 30.3%, present mild burden and 39.4% present intense burden. Regarding the relationship between caregiver burden, we verified that higher levels of informal caregivers

Keywords
Caregiving, Burden, Informal caregiver, Self-care.
burden were related to lower levels of perception of their competence to satisfy the needs related to the hygiene of the dependent person (rs= -0.514; p> 0.05).

Conclusions

Caring of a dependent-person may lead to health risks to the caregiver. Even though the sample size is small, it was possible to verify that a considerable number of caregivers presented intense emotional burden. Therefore, it is necessary that health professionals develop interventions to prevent caregiver burden.

Acknowledgments

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References


Keywords

Emotional burden, Informal caregiver, Self-care, Dependent-person, help2care.

O160

Growth and puberty in adolescent artistic gymnasts: is energy intake a question of concern?

Rita Giro1, Mónica Sousa2, Inês T Marques3, Carla Rêgo3
1Universidade do Porto, 4099-002 Porto, Portugal; 2Escola Superior de Saúde, Instituto Politécnico de Leiria, 2411-901 Leiria, Portugal; 3Centro da Criança e do Adolescente, Hospital CUF Porto, 4100-180 Porto, Portugal

Correspondence: Rita Giro (aritagiro@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O160

Background

Whether high-intensity training during childhood and adolescence compromises the growth and pubertal development of artistic gymnasts, remains a question for debate. However, when coupled with low energy availability, this hypothesis strengthens [1].

Objective

To characterize growth, sexual maturation, total energy intake and training aspects of competing artistic gymnasts and check for associations.

Methods

Convenience sample of 22 competing artistic gymnasts (13.8 ± 1.9 years) of both sexes. Anthropometric evaluation and body composition assessment were performed (InBody230). Tanner stage was determined in all athletes and age of menarche and regularity of menses were assessed in females. Total energy intake was quantified (3-day food record) and its inadequacy verified according to the recommendations [2]. Athletes’ training habits were also characterized.

Results

Females showed significantly higher body fat (15.9 ± 3.2 vs 7.2 ± 3.6) and lower skeletal muscle mass (45.7 ± 2.1 vs 51.1 ± 3.0) percentages than males (p < 0.05). No differences were found between genders for any of the additional variables in the study (p ≥ 0.05). Mean age of menarche was 12.6 ± 1.3 years. Short stature was detected in 12.6% of the female gymnasts (z score < -2), but no cases of low weight-for-height (z score < -2) were observed. All athletes presented total energy intakes below the recommendations. A high training frequency and intensity (median: 6 days/week, in a total of 20.8 hours) were reported, as well as an association of both training frequency (p=0.0765; p=0.016) and training intensity (p=0.727; p=0.026) with a later onset of menarche.

Conclusions

Our data suggests metabolic adaptation to chronically insufficient energy intakes in these athletes which, in accordance with growing evidence, might play a role in growth and pubertal delay.

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References


Keywords


O161

Communication effectiveness in nursing teams

António Calha1, Liliana Grade1, Oliveira Engenheiro1, Sandra Sapatinha2, Eva Neto2
1Instituto Politécnico de Portalegre, 7300-110 Portalegre, Portugal; 2Centro Hospitalar do Algarve, 8000-386 Faro, Portugal

Correspondence: António Calha (antoniocalha@hotmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O161

Background

The communication processes established among nurses are influential factors of the quality and effectiveness of care.

Objective

This research had as main objective to identify how nurses evaluate the different dimensions of the communicative process of the service in which they carry out their professional activity and what are the main obstacles to the proper functioning of the communication process.

Methods

This is eminently a quantitative study of correlational nature. For the collection of data, a questionnaire was used with closed-ended questions. 75 nurses from four health services (Neonatology, Medicine II, Emergency and Basic Emergency) were surveyed.

Results

Five indices were elaborated to measure the different facets of the communicative process: Communication efficiency (α = 0.82); Information sufficiency (α = 0.84); Information timing (α = 0.85); Explicitness of the message (α = 0.90) and practical applicability (α = 0.88). Similarly, five indices were computed in order to measure the nature of the information: Information of a clinical nature (α = 0.88); Organizational information (α = 0.89); Service information (α = 0.91); Team information (α = 0.92) and Personal information (α = 0.93). All indices had a variation range between 1, corresponding to the worst possible appraisal and 5, corresponding to the best possible appraisal. The results show that it is organizational information that nurses (M = 2.96) do worse in the communicative process, especially in the timely manner in which information arrives to them (M = 2.76). The results obtained through a Kruskal-Wallis test allowed to identify differences regarding the consideration of conflict as an obstacle to the communication process (X²(KW) = 30.01, p = 0.000) and overvaluation of personal and professional relations (X²(KW) = 12.60, p = 0.006).

Conclusions

The research identifies some communication weaknesses in the clinical context related mainly to the way information of organizational nature is disseminated in the services.
Factors affecting interpersonal conflict in nursing teams
António Calha,1,2 Marília Ferreira,2 Silvia Alminhas2, Telmo Pequito2
1Instituto Politécnico de Portalegre, 7300-110 Portalegre, Portugal; 2Hospital Espírito Santo, 7000-811 Évora, Portugal
Correspondence: António Calha (antoniocalha@hotmail.com)
BMC Health Services Research 2018, 18(Suppl 2):O162

Background
Teamwork is one of the foundations of nursing, exposing the profession to the vulnerabilities of the dynamics of group functioning. In this context, skills of conflict management in working teams are particularly relevant.

Objective
This research aimed to: I) identify how often nurses deal with conflict situations; II) identify the main causes of conflict mentioned by nurses and, III) assess the strategies adopted to deal with conflicting situations.

Methods
This is an exploratory, quantitative and correlational research. For the collection of data, a questionnaire was used with closed-ended questions. The sample consisted of a total of 35 nurses from the emergency department of a Hospital of the Portuguese NHS.

Results
Five indexes were computed in order to evaluate the different strategies to deal with conflict situations: I) commitment strategy (α = 0.745); II) avoidance strategy (α = 0.699); III) accommodation strategy (α = 0.745); IV) confrontation strategy (α = 0.618) and collaboration strategy (α = 0.698). All indices had a variation that ranged between 1, corresponding to the less frequent possible appraisal and 5, corresponding to most frequent possible appraisal. Most of the nurses reported that they were rarely involved in situations of conflict, however, 57.1% stated that they sometimes observed those situations. Results show that nurses mostly indicated the use of two strategies to deal with conflict: accommodation (M= 3.11) and confrontation (M= 3.07). Data analysis revealed that the strategy of accommodation had a statistically significant positive correlation coefficient in relation with the incompatibility of personalities (r= 0.400, p < 0.05) and a negative correlation coefficient in relation with the scarcity of material (r= -0.358, p < 0.05) as cause of conflict.

Conclusions
The results obtained allow us to conclude that the nature of the conflict determines the way it is managed by nurses. The data reveal, in particular, that the scarcity of material resources strengthens the confrontation in the nursing team, contributing to the degradation of the organizational environment. Thus, conflict management is an essential skill and tool that nurses can, and should, use as a basis of sustainability and development of nursing practice.

Keywords
Interpersonal conflict, Team work, Nursing, Emergency service.

Numerical modelling of electrical stimulation on scaffolds for tissue engineering
Paula Pascoal-Faria1,2, Pedro C Ferreira1, Abhishek Datta3, Nuno Alves1
1Centre for Rapid and Sustainable Product Development, Polytechnic Institute of Leiria, 2411-091 Leiria, Portugal; 2School of Technology and Management, Polytechnic Institute of Leiria, 2411-091 Leiria, Portugal; 3Soterix Medical Inc., 10001 New York, New York, United States of America; 4City College of New York, 10031 New York, New York, United States of America
Correspondence: Paula Pascoal-Faria (paula.faria@ipleiria.pt)
BMC Health Services Research 2018, 18(Suppl 2):O163

Preliminary experimental in vitro studies on tissue engineering applications have shown the advantage of using different type of stimuli, namely, mechanical, electrical, magnetic or its combination to enhance cell behaviour. In these studies cells proliferation and differentiation change significantly when electrical stimulation is applied on cells placed inside scaffolds systems within a bioreactor. We established an ambitious research program on numerical modelling of stimuli on scaffolds for tissue engineering. In this study we develop a new finite element-based (FE) multiphysics framework that allows the numerical optimization of the parameters involved when electrical stimulation is applied on bioscaffolds with different geometries and characteristics. The FE framework that has been developed allows the prediction of the electrical stimulation as a function of the scaffold geometry and its electrical characteristics, that may contribute to the acceleration of the proliferation and differentiation of the cells.

Keywords
Finite element model, Bioscaffolds, Electrical stimulation, Tissue engineering.

Motor competence in preschoolers with and without hearing loss
Guida Veiga1,2, Mariana Santos1, Brenda S Silva1, Catarina Pereira1,2,3
1Department of Sports and Health, School of Science and Technology, University of Évora, 7000-671 Évora, Portugal; 2Comprehensive Health Research Center, University of Évora, 7000-671 Évora, Portugal; 3Research Center in Sports Sciences, Health Sciences and Human Development, University of Beira Interior, 6201-001 Covilhã, Portugal; 4Developmental Psychology, Leiden University, 2311 EZ Leiden, Netherlands
Correspondence: Guida Veiga (gveiga@uevora.pt)
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Background
Several studies have been demonstrating the developmental consequences of early childhood hearing loss in terms of language, communication, academic, and social-emotional functioning [1]. However, there is still no consensus on whether younger children with hearing losses (HL) are comparable to hearing peers regarding their motor competence. Whereas some studies associate hearing loss with poorer motor development [2], others show that HI children are as proficient as their hearing peers [3]. Nevertheless, most of these studies has been focusing older children and to date, no study has examined Portuguese HI children's motor competence.

Objective
This study aimed to examine motor competence of children with HL in comparison with hearing children.

Methods
A total of 35 children participated in the study; 13 (mean age 4,73 years) with HL and 22 (mean age 5,09) hearing children. Children were tested by the Movement Assessment Battery for Children—Second Edition (MABC-2).

Results
Children with HL showed worse performances on manual dexterity, ball skills and balance than hearing peers, however these differences were only significant regarding balance (p=.006).

Conclusion
Children with HL are at greater risk for balance deficits.

References

Keywords
Motor skills, Emotion understanding, Empathy, Deafness, Cochlear implant.
Determinants of the beginning of breastfeeding in the first half hour of life

Dolores Sardo (dolores.sardo@gmail.com)
Nursing School of Porto, 4200-072 Porto, Portugal
BMC Health Services Research 2018, 18(Suppl 2):O165

Background
Breastfeeding in the first hour of life is associated with longer duration of breastfeeding, reduction of infant deaths in low-resource countries and improvement of the health status of the child and of mother. This practice favours early contact between mother and baby, and in Step 4 of the Ten Measures to be considered a Baby Friendly Hospital, it is recommended to help mothers to initiate breastfeeding within the first half hour after birth (WHO & UNICEF).

Objective
To evaluate the rate of breastfeeding initiation in the first half hour and two hours of the child's life; identify the determinants of breastfeeding in the first half-hour and two hours of life and their relationship to the prevalence of exclusive breastfeeding at four months.

Methods
We performed a quantitative, descriptive and cross-sectional study in a Portuguese population. The sample was no probabilistic, intentional (n = 150) 89.3% married mothers or with partner and average age was 31.1 years old, with normal delivery (43.3%). Data collection was conducted through a self-report questionnaire to mothers, 4 months after delivery.

Results
The rate of breastfeeding initiation in the first half hour and two hours of the child’s life was 48% and 88% respectively. In this sample the determinants related to obstetric history, new-born and breastfeeding were studied: only caesarean delivery revealed statistical significance in the first half hour (X²(1) = 6.141; p = 0.010); and there was a statistically significant difference associated with eutocic delivery and the initiation of breastfeeding up to two hours of life. The prevalence of exclusive breastfeeding at 4 months was predicted only by the weight of the new-born (βequeno para a idade geotascional=4.821; X²wald(1)= 21.616; p < 0.001; OR=124.038).

Conclusions
In this study, only the type of delivery had significant statistical influence for the initiation of breastfeeding in the first half hour of life. We also found that the initiation of breastfeeding in the first two hours of life did not predict its prevalence at four months.

Keywords
Breastfeeding, Prevalence, First half-hour.

Body image acceptance as a protector against the effect of body image-related shame memories on emotional eating in women with Binge Eating Disorder

Cristiana Duarte1, José Pinto-Gouveia2
1School of Psychology, Faculty of Medicine and Health, University of Leeds, LS2 9JT, Leeds, United Kingdom; 2Cognitive and Behavioural Centre for Research and Intervention, University of Coimbra, 3001-802 Coimbra, Portugal
Correspondence: Cristiana Duarte (c.duarte@leeds.ac.uk)
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Background
Understanding the factors underlying the public health problem of Binge Eating Disorder (BED) is a pressing need. Research show that body image-related shame memories are significantly associated with the severity of binge eating symptomatology in women with Binge Eating Disorder (BED) [1]. These individuals may eat as a means to temporarily avoid or reduce negative emotions related to body weight and shape [2, 3]. Evidence suggests that body image flexibility (i.e., the ability to accept and fully experience body image-related internal experiences - thoughts, emotions, memories - when doing so is consistent with valued-living [4], may deter the engagement in emotional eating [5].

Objective
The current study examined the moderator effect of body image flexibility on the association between shame memories and emotional eating in a sample of women with BED.

Methods
109 women with the diagnosis of BED participated in this study. Mean (SD) participants age was 37.39 (10.51) years and BMI was 33.69 (7.75) kg/m². Participants were assessed through the Eating Disorder Examination 17.0D, the Shame Experiences Interview (SEI) and filled self-report measures assessing the centrality of the recalled shame memories, emotional eating and body image flexibility.

Results
Descriptive statistics showed that body image-related shame memories were the most frequently recalled memories. Correlational analysis revealed that the extent to which the recalled shame memory is central to identity is significantly associated with emotional eating. Body image flexibility was negatively associated with the centrality of the recalled shame memory and emotional eating. Results of the moderation analysis showed that body image flexibility significantly moderate the association between the centrality of the recalled shame memory and emotional eating. This suggests that patients with BED with a greater trait-like ability to accept body image-related negative internal experiences, present a lower tendency to use food as a form of experiential avoidance.

Conclusions
Findings support a conceptual integrative model of binge eating symptomatology that clarifies the role that contextual and interpersonal variables play in the development and persistence of difficulties in regulating eating behaviour in BED, and how body image flexibility may have a protective role in these associations. These results also have important clinical implications supporting the relevance of contextual-behavioural interventions that address the role of shame memories, body image difficulties and that help patients to develop body image flexibility.

References

Psychometric properties of the Psychological Welfare Scale

Rosa M Freire, Filipe Pereira, Teresa Martins, Maria R Grilo
Nursing School of Porto, 4200-072 Porto, Portugal
Correspondence: Rosa M Freire (rosafreire@esenf.pt)
BMC Health Services Research 2018, 18(Suppl 2):O167

Background
Pl ease and happiness have been associated with well-being, and obtaining maximum enjoyment is seen as a life goal. Nowadays, well-being is perceived to be either subjective wellbeing (SWB) or psychological well-being (PWB). SWB involves global evaluations that affect life quality, whereas PWB examines perceived existential challenges of life [1].
Objective
To measure Psychological Welfare and validate the constructs of 42 items of the Psychological Welfare Scale.

Methods
Quantitative, exploratory and cross study was used as methodology. A convenience sample was performed with 252 participants. The measuring instrument was developed using the Qualtrics program. The study had favourable appreciation and consent from the College Nursing of Porto (ESEP) that provided a computer platform that allowed the participants to access to the measurement instrument. The construct in analysis in this study was developed by Ryff [2] and intended to measure Psychological Welfare on six scales: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Originally, each subscale was composed of 20 items, but the author suggested smaller versions, preferably the version of seven items per subscale. Respondents rated statements on a scale of 1 to 6, with 1 indicating strong disagreement and 6 indicating strong agreement. Participants are, on average, 31.38 years old (SD=12.88) and 81% are female. The analysis of the items of the scale was performed through item descriptive analysis, confirmatory factorial analysis, internal consistency analysis of each subscale and factorial validity using AMOS (version 22, IBM SPSS). Results
The descriptive analysis of the items showed that the response tendency is above the midpoint. In the analysis of the adaptation of the theoretical model to the empirical model, we verified that the model constituted by a factor with six manifested variables resulting from the sum of the seven items of each subscale showed good indexes of adjustment. The internal consistency values of each subscale ranged from 0.69 to 0.82 suggesting a reasonable to good internal consistency. All correlations showed significant values at the 0.01 level.

Conclusions
The values found suggest that the concepts of the subscales of the measuring instrument are related but without any redundancy of measurements. The Psychological Welfare Scale is a theoretically grounded instrument which specifically focuses on measuring multiple facets of psychological welfare. We consider this Scale of Psychological Welfare to be a valid and reliable tool to measure psychological welfare in a Portuguese context.

References

Keywords
Assessment, Psychological Welfare, Scale, Psychometrics properties, Validation Studies.

Objective
The influence of statins in the skeletal muscle of Individuals with hypercholesterolemia - ultrasound study
Alexandra André, João P Figueiredo, Carlos AF Ribeiro, Gustavo F Ribeiro, Paula Tavares
1Escola Superior de Tecnologia da Saúde de Coimbra, Instituto Politécnico de Coimbra, 3046-854 Coimbra, Portugal; 2Instituto Biomédico de Investigación da Luz e da Imagem, 3000-548 Coimbra, Portugal; 3Faculdade de Ciências do Desporto e Educação Física, Universidade de Coimbra, 3040-248 Coimbra, Portugal
Correspondence: Alexandra André (alexandra.andre@estescoimbra.pt)

Background
The skeletal muscle (SM) is a kind of tissue that has the capacity to adjust with different stimulus. Intake drugs can cause alterations and incapacity to do exercise. To evaluate the muscle macroscopically measurements is important to do. Penenate angle and fascicle length are determinants of muscle strength. Thickness is important to evaluate state of atrophy or hypertrophy. The ecogenicity evaluates the fat infiltration in atrophy. Statins interfere with the SM functions and are the prescribed medications for prevention and treatment of high cholesterol more used in the world. A side effect of these drugs is myotoxicity. Creatine Kinase (CK) is a biomarker to evaluate the severity of muscle damage that can change with gender, age, and physical activity. Factors that influence the increase of CK are exercise intensity, if it exceeds the metabolic capacity alterations that origin CK release to the blood circulation and sarcromere degradation.

Objective
The aim of this study was to evaluate and analyse macroscopically muscle structures in patients with hypercholesterolemia, in order to interpret the pathophysiological mechanisms produced by statins inducing myotoxicity. The sensitivity and acuity to the ultrasound were used to evaluate the muscle.

Methods
The study was performed in 47 individuals, age between [50-65] years old. Ultrasound tests were performed to the 47 individuals in three different groups – control group, individuals that intake statins and individuals that intake statins and do exercise. Gastrocnemius muscle was performed bilaterally using a 13Mhz probe to determine the dimensions of the pennate angle, fascicle length and thickness. A questionnaire and the informed consent term were signed by all individuals. The study was approved by the Ethics Committee for Health of the Regional Health Administration (Study nº45-2015)

Results
Differences in dimensions were observed. Significant differences were obtained for the penname angle and the fascicle. The main differences were observed between the control group and experimental groups that intake statins.

Conclusions
Ultrasound has sensitivity and specificity to analyse the muscle tissue macroscopically. Individuals who intake statins have lower values of the evaluated structures. Differences were observed in the pennate angle in both sides, in the group that intake statins. The literature is unanimous in stating that individuals who take statins develop muscle changes called myalgia. The side effects of statins may increase with exercise. Ultrasonography is an imaging modality not yet widely used in this type of approach.

Keywords
Muscle, Ultrasound, Statins, Hypercholesterolemia.
Objective
The purpose of this study is to verify if through breath control ADHD children can increase heart rate variability (HRV).

Methods
Vital signs of ten potential ADHD children (11.22 ± 42 years old, 3 girls), were collected for 6 minutes, in supine position, under two conditions: I) normal breathing (NB); and, II) slow abdominal breathing (AB), e.g., [11]. HRV data acquisition was carried out through Polar V800 [12]. HRV analysis was made through gHRV software [13-15].

Results
During AB children significantly reduced breathing frequency (BF) (8.9±4.2, Md=8) compared to NB frequency (18.3±5.9, Md=19) (Z= -6.439, p<0.01, r=.81); and diastolic pressure (DP) (AB – 61.3±8.7, Md=61; NB – 63.6±6.4, Md=63; Z= 2.146, p<.05, r=.29); significantly augmented standard deviation of HR (AB – 7.4±1.4; NB – 5.0±1.5; Z= 2.310, p<.05, r=.89); standard deviation of mean interval RR (AB – 80.5±22.9ms; NB – 64.3±27.7ms; Z= 2.192, p<0.05, r=.73); and SD2 (AB – 106.9±29.7; NB – 82.5±35.6; Z= 2.192, p<.05, r=.73). Also, during AB children reduced systolic pressure (101.3±16.4, Md=97; NB – 104.9±17.1, Md=103; ns), heart rate frequency (79.8±11.7bpm, Md=81.8; NB – 81.7±11.8bpm, Md=83.9; ns), and, mean interval RR was greater (766.9±117.8ms Md=734.8; NB – 749.1±115.2ms, Md=715.8; ns); like rMSSD (112.9±53.3ms, Md=108.1; NB – 97.5±64.1ms, Md=79.9; ns), and HRV index (18.3±4.7ms, Md=18.9; NB – 15.6±6.1ms, Md=14.1; ns); and, ApEn became positive (greater) (.0001±.001ms, Md=.0001; NB - (-).001±.002ms, Md=-.0001; ns).

Results
Consequently, with one short training session, these children had the capacity to implement a significantly slower BF to values near 8 bpm, cf. [11], which resulted in a reduction in HR, SP, and DP; and, in an augmentation of various parameters of HRV. All these changes point to an increase of vagal activity during AB. If vagal activity was reinforced during AB [16-17], it means that, maybe, a process of bottom-up adjustment of attention and emotional responses can be promoted, cf. [18-20].

References
Can older adults accurately perceive affordances for a stepping forward task? Differences between faller and non-faller community-dwelling older adults

Gabriela Almeida, Jorge Bravo, Hugo Rosado, Catarina Pereira
Department of Sports and Health, School of Science and Technology, University of Évora, 7000-671 Évora, Portugal

Correspondence: Gabriela Almeida (gsna@uevora.pt)

Background

Different studies framing an ecological approach to perception [1] have tried to understand how people, mostly children [2] and adults [3], perceive their action limits, in other words, what an environment affords related on individual characteristics. However, studies about older adults seem to be scarcer [4–7], particularly studies focused on whether or not faller and non-faller older adults can accurately perceive affordances for a stepping forward task.

Objective

The purpose of this study was to determine if older people could accurately perceive affordances for the task of stepping forward. The relationship between real and estimated maximum distance was explored in community-dwelling older adults, comparing fallers with non-fallers.

Methods

A sample of 347 community-dwelling older adults (age 73.02 ± 6.40 yr; non-fallers: 57.9%, fallers: 42.1%) with the absence of cognitive impairment participated in the study. Participants were asked to predict their maximum distance for a stepping forward prior to performing the task. Absolute Percent Error (APE), Absolute Error (AE) and Error Tendency (ET) were calculated accordingly (2,8). APE measured deviation percentage from accurate perceptions, AE indicated the discrepancy (in cm) between estimation and real performance. ET indicated the direction of the error (under- or overestimation bias).

Results

On average, non-faller estimated (63.7 ± 15.5 cm) and performed (70.7 ± 14.9 cm) greater distances than faller (estimation: 57.1 ± 14.5 cm; real: 61.7 ± 14.6 cm) older adults. No statistically significant differences were observed in APE (fallers: 7.2 ± 12.4%; non-fallers: 9.6 ± 12.5%). However, differences in AE were significant between faller (6.7 ± 5.9 cm) and non-faller (9.6 ± 12.5 cm) older adults (p = .001).

Old people had a huge tendency to underestimate (77.2%) the maximum distance achieved in a stepping forward. The results show a significant association between ET and being faller ($\chi^2(1) = 6.407$, p = .01). Despite general participants exhibit an underestimation tendency, this tendency is greater in non-fallers (61.6% vs 38.4%). Further, there were fewer non-fallers than fallers overestimating their ability to step forward (45.6% vs 54.4%).

Conclusions

Older adults displayed a tendency to underestimate the maximum distance they can stepping-forward. The bias of overestimation is more frequent in fallers, whereas persons who underestimated tend to do not fall, suggesting that they have a protective behaviour which avoids falls. Data evidence that older adults can perceive what the environment affords, which is in agreement with an ecological perspective to perception and action.

Acknowledgements

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References


Keywords

Aging, Falling, Perception of affordances, Gait.
Methods
Participants were 266 women and 81 men aged 73.0 ± 6.4 years. They were assessed for fall occurrence (yes vs. no), and for stepping-forward and perception boundaries. Participants judged their maximum stepping-forward distance prior to the performance of the estimated task. Absolute Error (AE) [estimated – real] (cm) and Absolute Percent Error (APE) (%) were computed, and the Error Tendency (ET) was classified (underestimation vs. overestimation) [5, 6].

Results
Univariate binary regression analysis showed that all the described variables explain significantly fall occurrence (p < 0.05). Data showed that, for each additional cm estimated in the stepping-forward test, the likelihood of falling decreased on 2.9%, OR: 0.971 (95%CI: 0.957-0.986); and for each additional cm performed in the test, this likelihood decreased on 4.0%, OR: 0.960 (95%CI: 0.945-0.975). Furthermore, data showed that for each additional cm computed as AE, the likelihood of falling decreased on 3.6%, OR: 0.964 (95%CI: 0.933-0.996), and for each additional 1% computed as APE this likelihood decreased on 0.9%, OR: 0.991 (95%CI: 0.969-1.013). Finally, data showed that subjects reporting an ET of underestimation were less 47.7% likely for falling, OR: 0.523 (95%CI: 0.315-0.867), than subjects showing an ET of overestimation.

Conclusions
The new stepping-forward affordance perception test evidenced to be useful to determine the risk of fall occurrence. A higher estimation of maximum distance achieved or a higher real performance on the test were associated with a lower risk of falling. Further, a higher AE and an underestimation tendency showed to be associated with a decreased risk of falling. This suggests that the marge of security provided by the higher performance ability, in contrast with a lower perception of affordance, which is protective and avoids falls.

Acknowledgements
This study was funded by ESACA Project (Grant ALT20-03-0145-FEDER-000007).

References

Keywords
Aging, Falling risk, Boundary action, Perception.

Poster Communications

P1
Prevalence of low back pain in surfers: associated factors
Beatrix Minghelli1,2, Inês Sousa1, Sara Graça1, Sofia Queiroz1, Inês Guerreiro1
1School of Health Jean Piaget – Algarve, Instituto Piaget de Silves, 8300-025 Silves, Portugal; 2Research in Education and Community Intervention, Piaget Institute, 1950-157 Lisbon, Portugal
Correspondence: Beatrix Minghelli (beatrix.minghelli@silves.piaget.pt)
BMC Health Services Research 2018, 18(Suppl 2):P1

Background
Paddling in surf consists on the movement that the surfer most performs during practice, and this repeated movement, associated with a spinal hyperextension posture, may predispose to the occurrence of injuries.

Objective
The aim of this study was to verify the prevalence of low back pain in surfers, and its associated factors.

Methods
The sample consisted of 50 Algarve surfers, 40 (80%) males, aged between 9 and 57 years (24.26 ± 12.41 years). The measurement instruments consisted on a questionnaire and on the use of the KINOVEA software for movement analysis. The questionnaire contained questions about the socio-demographic characteristics of the population and about the occurrence of low back pain (at the moment, over a 12-month period and during all surfing practice). Surfers were demarcated with a tape on D8 and at the base of the sacrum. Surfers were filmed while performing the paddling movement, in the sea, using their own boards. The movement movies recorded were analysed. A line was drawn between two points, while another line was projected on the board, establishing an angle. Data analysis was performed through the application of binary logistic regression, the method entered used as a binary outcome variable for the prevalence of low back pain during all surfing practice.

Results
8 (16%) surfers reported low back pain at the moment of data collection, 16 (32%) reported low back pain in the last 12 months, and 23 (46%) surfers reported that they had felt low back pain throughout all their surfing practice. Spinal hyperextension angles varied between 14° and 38° (23.04° ± 4.73°). Female surfers presented a higher risk of sustaining surfing-related injuries than males (odds ratio= 1.36; 95%CI: 0.33-5.55; p= 0.671), individuals who had surfed for less than five years were at 2.6 (95%CI: 0.82-8.20; p = 0.103) more risk than those who had surfed for more than 5 years, surfers with ages equal or upper to 18 years revealed 1.15 (0.38-3.49; p= 0.811) odds than younger surfers, those who didn’t participate in the championships had 1.57 (0.50-4.83; p= 0.442) more chances compared to those who participated, and surfers with an spinal hyperextension angulation above 23° revealed 1.04 (0.34-3.19; p = 0.945) to be more likely to develop low back pain.

Conclusions
There was a high prevalence of low back pain in the surfers analysed. Thus, it is necessary to have a better biomechanical analysis of the paddle movement of surfing.

Keywords
Low back pain, Prevalence, Surf.
Objective
This study evaluates work-related musculoskeletal disorders (WMSDs) in nurses from a central hospital, using the Rapid Upper Limb Assessment (RULA) method.

Methods
This is an observational, cross-sectional study with a sample of 34 nurses from the surgery department. Collections were made through the observation of tasks performed by nurses when applying the RULA. The final score was associated with the need for intervention, for prevention of WMSDs varying between 1 and 7; no intervention is required and immediate intervention is required, respectively. Descriptive analysis of the partial and final scores, as well as the Mann-Whitney test, the Fisher exact test and the chi-square test were performed.

Results
The tasks with the highest risk were bed hygiene and transfers. Among the evaluated tasks, the majority of the final scores obtained were 6 and 7, which refers to a need for intervention soon or immediately, respectively. There were no significant associations between the risk of injury and gender, age or length of service.

Conclusions
It was concluded that most of the tasks performed by nurses presented a high final score, according to the RULA method, and the body segments with the highest risk are shoulders, neck and trunk, suggesting the need for immediate intervention.

Keywords
Musculoskeletal disorders, RULA, Occupational Health.

P3
After disaster: conceptualising the extent and length of the psychological impact
Alice Morgado (alice.morgado@northampton.ac.uk)
University of Northampton, Northampton, NN2 6NU, United Kingdom
BMC Health Services Research 2018, 18(Suppl 2):P3

Background
Psychosocial responses to disasters have been widely explored in psychological and psychiatric literature. However, some issues have not yet been clarified with regards to conceptualizing disasters and addressing the long-term effects of disasters through a perspective focused on developmental and positive psychology principles.

Objective
The aim of this study is to explore existing research regarding psychological dimensions of exposure to disaster.

Methods
A literature review was conducted focusing on disaster conceptualisations and long-term adaptive functioning of those who have and have not been identified as individuals at risk for adverse outcomes. Focusing on conceptions of disaster and trauma, the extent of the impact in different populations was also considered, along with existing knowledge regarding reactions to disaster and possible factors involved.

Results
There has been significant effort in designing immediate and short-term relief and assistance in disasters, addressing the most common effects of exposure to trauma [1-3]. Developmental considerations have outlined differential psychological outcomes through the life-span [4-7]. An important body of research has focused on resilience in relation to trauma [8-11], nevertheless, studies regarding long-term consequences and adaptive functioning are still scarce [12]. Efforts seem to focus more on preventing relatively immediate severe symptoms of psychopathology [13, 14] rather than on promoting long-term psychological adjustment.

Conclusions
Research aimed at understanding the long-term psychological effects of exposure to disasters, looking at individuals who showed and did not show psychopathology following that incident seems a sensible topic to be developed. Aiming to understand how individuals in different life stages deal with adversity and to design interventions able to support individuals in dealing with the less visible long-term effects of trauma is equally important. In addition, to focusing on the absence of psychopathology, researchers should have in mind the promotion of positive development throughout the life-span.

Researchers should develop measures that assess exposure to disaster/trauma, taking into consideration not only the type of event, dates and duration, but also the type of exposure and involved stressors, attempting to capture disaster exposure in its complexity. At the same time, research should acknowledge the importance of the meaning that individuals attribute to an event and its consequences, more than the event itself [2, 3], and consider perceived individual, family and community resources in relation to it.

References

Keywords
Disaster, Psychological impact, Trauma, Resilience, Development.

P4
Evaluation of Portuguese athletes knowledge regarding doping in sports
Marco Jardim1, André Ruivo2, Catarina Jesus3, David Cristovão
1 School of Health, Polytechnic Institute of Setúbal, 2915-503 Setúbal, Portugal; 2 Portuguese Sports Physiotherapy Interest Group, Portuguese Association of Physiotherapists, 2785-679 São Domingos de Rana, Portugal; 3 Hospital de Loulé, 8100-503 Loulé, Portugal
Correspondence: Marco Jardim (marco.jardim@ess.ips.pt)
BMC Health Services Research 2018, 18(Suppl 2):P4
Background
Doping is no longer an exclusive issue in sports and has been recognized as a worldwide public health problem. A relevant part of doping violations has been discovered in athletes from all ages and every competitive level. In sports, Portuguese athletes' knowledge about doping rules violations is far to be known and an accurate picture about their state of knowledge seems to be an important factor to develop effective educational anti-doping programs.

Objective
The purpose of this study was to evaluate the knowledge of Portuguese athletes towards doping in sports, regarding substances and methods on the prohibited list, health consequences, athletes' rights and responsibilities and doping control procedures.

Methods
A cross sectional study was performed in several Portuguese sport institutions. A total of 374 non-professional athletes (83% response rate) were evaluated about knowledge on doping in sports. Self-adjudication list was used to collect socio-demographic data and doping knowledge. Descriptive statistics were carried out to express athlete's sociodemographic information and mean doping knowledge score. Chi square tests were used to assess the association between study variables and doping knowledge questions. Inferential statistics (Mann–Whitney U test and Kruskal Wallis tests, p < 0.05) were used to examine differences between study variables.

Results
Only 21% of the athletes demonstrated good global knowledge on doping. The overall mean knowledge on doping was 56.8 ± 13.8 were the highest mean knowledge area was observed on rights and responsibilities (62.7 ± 21.5), while the lowest was perceived on doping control procedures (54.0 ± 18.4). Higher global knowledge on doping was associated with female athletes, aged between 19-21 years with university educational level. No differences were found between team sports and individual sports athletes.

Conclusions
No national-level data had been reported so far and this study can provide useful information regarding gaps and trends about doping practices in the country. Doping knowledge among the participants was poor, particularly in terms of prohibited substances and doping control procedures. The results of this study suggest that educational anti-doping programs should be intensified and more effective amongst Portuguese sports populations.

Keywords

PS
Do children with Specific Language Impairment (SLI) present implicit learning (IL) deficits? Evidence from an Artificial Grammar Learning (AGL) paradigm
Ana P Soares1, Andreia Nunes1, Paulo J Martin2, Marisa Lousada3
1Psychology Research Center, School of Psychology, University of Minho, 4710-057 Braga, Portugal; 2Center for Humanistic Studies of the University of Minho, University of Minho, 4710-057 Braga, Portugal; 3Center for Health Technology and Services Research, School of Health Sciences, University of Aveiro, 3810-193 Aveiro, Portugal

Correspondence: Ana P Soares (asoares@psi.uminho.pt)
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Background
Specific Language Impairment (SLI) is a neurodevelopmental disorder involving language deficits in the absence of other associated condition [1]. The aetiology of SLI is hotly debated, ranging from representational deficits in grammar to impairments in the cognitive processes that underlie language acquisition. Recent research suggests that SLI difficulties may arise from implicit learning (IL) deficits, i.e. impairments in the cognitive mechanisms that allow children to extract the structural regularities present in the input and to generalize it to new contexts [2]. IL studies have been conducted mainly with adults and unimpaired children using the Serial Reaction Time Task (SRTT). The few studies conducted with language impaired children produced inconsistent results [3]. Since performance of this task involves a motor component that seems to be also impaired in SLI, it is critical to conduct studies using other tasks and paradigms.

Objective
To analyse if IL deficits are core in SLI using an Artificial Grammar Learning (AGL) task. The AGL task is particularly suited to study IL deficits in SLI because it mimics language acquisition more closely than SRTT and, in addition, avoids its motor component. In an AGL task, participants are firstly exposed to strings that conform the rules of an artificial-grammar (learning-phase). Then, they are asked to decide whether new strings conform or not these rules (test-phase). Performance is typically better to grammatical (G) than to non-grammatical (NG) strings, indicating that participants learned the grammar even without consciousness of it.

Methods
Fourteen Portuguese children participated in this study (Mage=4.86, SD=0.64). A SLI diagnosis matched in age, sex, and non-verbal IQ with other 7 children with typical development (TD). All children were asked to perform a visual AGL task presented as a computer game. Written consent was obtained from all parents.

Results
Results showed that TD children outperformed SLI children in the test-phase. More hits were also observed for the G strings that revealed higher- than lower-similarity with the strings presented in the learning-phase. Furthermore, the analysis of children performance showed that both TD children revealed an increased number of correct responses and a decreased number of attempts to achieve a correct response in the learning-phase, SLI children did not.

Conclusions
Children with SLI reveal deficits in their IL abilities as indexed by a worse performance both in the learning and test phases of a visual AGL task. IL malfunctioning should be considered in the aetiology of the disorder.

References

Keywords
Specific Language Impairment, Implicit learning, Artificial grammar learning, Language impaired children.

P6
Fatal road accidents: behavior and the use of safety equipment
Christine B Godoy1, Maria HPM Jorge2, Jackeline G Brito1
1Faculty of Nursing, Universidade Federal de Mato Grosso. 78060-900 Cuiabá, Mato Grosso, Brazil; 2School of Public Health, Universidade de São Paulo, 01246-904 São Paulo, Brazil
Correspondence: Christine B Godoy (christineufmt@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):P6

Background
At present, road accidents represent the second major cause of death in Brazil, striking mainly the younger population [1, 2]. Several factors contribute to this reality, among them, the accelerated urbanization process with significant population growth and an increase in the number of vehicles in circulation; impunity for violators, lack of proper supervision; old vehicle fleet; poor maintenance of public roads; poor signage; alcohol and driving combination; non-use of safety equipment and improper behaviour of drivers of pedes-trians and vehicles [3-6]. Considering that death is the maximum expression of a given problem in a society [7-8], learning about the
factors associated to casualties from road accidents may direct prevention actions and contribute to higher effectiveness [9-10].

**Objective**

This study examines the factors related to fatal road accidents involving children, adolescents and youngsters in Cuiabá, the capital of Mato Grosso, in 2009.

**Methods**

This is a domestic survey descriptive in nature. In the first stage of the research, data were collected through Death Certificates (DO), in order to identify, mainly, victims and address. In the second stage of the study, a household survey was conducted with the families of the victims, in which information was collected on the use of safety equipment and behaviour of victims in traffic, according to the families’ reports. The analysis has been done with the EpiInfo software.

**Results**

In the period and population studied, deaths occurred only due to land transport accidents (codes V01 to V89 of ICD10), generally referred to as traffic accidents, and there were no fatalities of other types of transport (such as air transport or by boat). We studied 22 deaths due to traffic accidents. Most of whom are male (86.4%). Among the motorcycle driver victims, not all were wearing a helmet (44.4%), many did not respect traffic signs (55.5%), and some used to combine alcohol consumption and driving (33.3%). Among the car driver victims, 85.7% were not using seat belts, and many used to combine alcohol consumption and driving (57.1%). The pedestrian victims were not using the Zebra crossing (50.0%) or respected the red light of the Pelican crossing (50.0%).

**Conclusions**

The results point to the need to intervene directly in risk factors in order to reduce road casualties.

**References**


**Keywords**

Road accidents, External cause, Mortality, Risk factor.
Emotions, Emotional Labour, Conceptual Model, Paediatric Nursing.

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References

Keywords

Simulation training, Education, Nursing, Clinical Competence, Intubation, Gastrointestinal, Patient safety.

P8

Emotional labour in paediatric nursing: a propose model for practice guidance

Paula Diogo (pndiogo@esel.pt)

Unidade de Investigação & Desenvolvimento em Enfermagem, Escola Superior de Enfermagem de Lisboa, 1600-190 Lisboa, Portugal

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Health-disease processes experienced by children and youth, and their families, are often associated with intense emotionality and, simultaneously, entails a great emotional challenge for nurses in their care, requiring emotional labour of triple centrality: on the client, nurse and nurse-client relationship [1]. Nurses perform this emotional labour according to their personal resources and learning from the day-to-day experience of care [2]. Moreover, this emotional dimension of nursing care continues to be underestimated by health institutions, and by nurses themselves, so that emotional labour is not always the object of reflection and/or support in scientific evidence [3]. For this reason, conceptual models are needed to guide and strengthen nurses in their practice, especially when the context is peculiar as in paediatric care. Diogo [1], presented an explanatory hypothesis of the process of therapeutic use of emotions in paediatric nursing, arguing that Emotional Labour in Paediatric Nursing translates into actions of positive transformation of emotional experience into interactions of care with the paediatric client, through five categories of intervention: 1) Promoting a safe and affective environment; 2) Nurturing care with affection; 3) To facilitate client emotional management; 4) to build stability in the relationship; 5) to regulate their own emotional disposition to care. This Emotional Labour Model in Paediatric Nursing was developed based on the nursing paradigm of transformation [4] whose central concept is Caring, supported by the Watson’s Human Health-disease processes experienced by children and youth, and their families, are often associated with intense emotionality and, simultaneously, entails a great emotional challenge for nurses in their care, requiring emotional labour of triple centrality: on the client, nurse and nurse-client relationship [1]. Nurses perform this emotional labour according to their personal resources and learning from the day-to-day experience of care [2]. Moreover, this emotional dimension of nursing care continues to be underestimated by health institutions, and by nurses themselves, so that emotional labour is not always the object of reflection and/or support in scientific evidence [3]. For this reason, conceptual models are needed to guide and strengthen nurses in their practice, especially when the context is peculiar as in paediatric care. Diogo [1], presented an explanatory hypothesis of the process of therapeutic use of emotions in paediatric nursing, arguing that Emotional Labour in Paediatric Nursing translates into actions of positive transformation of emotional experience into interactions of care with the paediatric client, through five categories of intervention: 1) Promoting a safe and affective environment; 2) Nurturing care with affection; 3) To facilitate client emotional management; 4) to build stability in the relationship; 5) to regulate their own emotional disposition to care. This Emotional Labour Model in Paediatric Nursing was developed based on the nursing paradigm of transformation [4] whose central concept is Caring, supported by the Watson’s Human Health-disease processes experienced by children and youth, and their families, are often associated with intense emotionality and, simultaneously, entails a great emotional challenge for nurses in their care, requiring emotional labour of triple centrality: on the client, nurse and nurse-client relationship [1]. Nurses perform this emotional labour according to their personal resources and learning from the day-to-day experience of care [2]. Moreover, this emotional dimension of nursing care continues to be underestimated by health institutions, and by nurses themselves, so that emotional labour is not always the object of reflection and/or support in scientific evidence [3]. For this reason, conceptual models are needed to guide and strengthen nurses in their practice, especially when the context is peculiar as in paediatric care. Diogo [1], presented an explanatory hypothesis of the process of therapeutic use of emotions in paediatric nursing, arguing that Emotional Labour in Paediatric Nursing translates into actions of positive transformation of emotional experience into interactions of care with the paediatric client, through five categories of intervention: 1) Promoting a safe and affective environment; 2) Nurturing care with affection; 3) To facilitate client emotional management; 4) to build stability in the relationship; 5) to regulate their own emotional disposition to care. This Emotional Labour Model in Paediatric Nursing was developed based on the nursing paradigm of transformation [4] whose central concept is Caring, supported by the Watson’s Human...
Background

Oxygen is recognised as an essential element in the wound healing process and, it is suggested that the topical application of oxygen may be a promising therapy in wound care. Thus, the importance of oxygen in the tissue healing process is evident, namely in ATP synthesis; production of reactive oxygen species, which stimulate vascular endothelial growth factor synthesis; and microbial growth inhibition through the promotion of macrophage chemotaxis and increase of leucocyte activity. Moreover, oxygen increases the rate of collagen deposition, an important step in healing, which supplies the matrix for angiogenesis and tissue maturation. Thus, according to the P.I.C.O. review model for clinical questions, this systematic review intends to answer the research question "In chronic wounds, how does topical oxygen therapy affect wound healing?". It was considered chronic wounds for "patient population or disease of interest", topical oxygen therapy for "intervention or issue of interest" and wound healing for "outcome". However, a "comparison intervention or group" and a "time frame" were not applicable.

Objective

The aim of this study was to conduct a systematic review of the current evidence for this therapy through the analysis of primary research studies published between January 2006 and December 2016.

Methods

Published literature was identified using Scopus, B-On, Scielo, Pubmed, Ebscos Host and Medline databases. Exclusion criteria and quality indicators were applied and a total of 11 articles with different designs were included in the review.

Results

The studies analysed emphasise the evidence of additional O2 usage in wound care, since it reduces hypoxia and it allows triggering mechanisms which are essential for the healing process. The analysed literature presents the results of its effects in its various forms: pressurized, continuous and dissolved. Although there are still questions about the exact mechanisms of this treatment and it is necessary to carry out randomised studies, the current results suggest that this therapy plays an important role in restoring the O2 balance in the wound bed, necessary for healing.

Conclusions

These findings show the potential of this therapy in promoting healing of chronic wounds and improving people’s quality of life. In addition, there are many other potential advantages related to its usage, such as low cost, apparent safety, no associated adverse effects and the possibility to submit a diversified population to this care at any health organisation or even at the patient's home.

Keywords

Oxygen, Topical administration, Wound Healing, Wounds and Injuries.

P11

Microbiological characterization of bathing areas of a county in the Northern region

Joana Mendes, Marlene Mota, António Araújo, Cecília Rodrigues, Teresa Moreira, Manuela Amorim

Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal

Correspondence: Manuela Amorim (mas@ess.ip.pt)

BMC Health Services Research 2018, 18(Suppl 2):P11

Background

The management of bathing water aims at the protection of human health and the preservation, protection and improvement of the quality of the environment [1, 2]. In order to control the quality of these same waters for recreational use, microbiological indicators of faecal contamination are monitored, according to Decree-Law 135/2009 of June 3rd [1]. The microbiological indicators of faecal contamination used are Escherichia coli and Enterococcus spp, since they are commensals of the gastrointestinal flora of humans and most animals [3].

Objective

This study aimed to characterize the results of intestinal E. coli and Enterococcus parameters of inland bathing waters of a county in the northern region of Portugal during 2016.

Methods

A retrospective descriptive study was performed using database records from a northern laboratory. The microbiological parameters studied to characterize the inland bathing waters included CFU/100mL of E.coli and CFU/100mL of intestinal Enterococcus. The results were classified as "Bad", "Acceptable", "Good" or "Excellent", according to the Decree-Law 135/2009 of June 3rd [1].

Results

We verified that in the total of 26 inland bathing waters under study, 6 (23.1%) obtained a quality equal to or greater than "Acceptable". The remaining 20 bathing waters (76.9%) were classified as "Bad". This result, in 17 samples was due to both parameters, intestinal Enterococcus and E. coli. In the other three, the "Bad" classification was only due to the Enterococcus results. The months with the highest counts of E. coli were September (45.69%), June (43.30%) and May (39.62%), and for Enterococcus were May (52.83%), June (52.58%) and July (32.35%).

Conclusions

In an initial study and applying criteria that will then have to be more extended in terms of time, there is a first tendency for most of the inland bathing waters under study to present "Bad" quality (76.90%). Since all bathing waters should have at least "Acceptable" quality and provisional data, these results indicate an urgent need to take measures in order to counteract this and increase the number of bathing waters classified as "Excellent" or "Good." The different E.coli and intestinal Enterococcus counts observed in different months showed that climatic, environmental, social and urban factors could be involved in this differences and deserves attention in future studies [2, 4]. The quality of bathing water is fundamental in terms of public health. In this sense, the results of this study are worrisome, however these studies should be conducted in a longer time perspective.

References


Keywords

Inland bathing water, Fecal contamination indicators, Escherichia coli, Enterococci intestinal.

P12

Microbiological characterization of food handlers in school canteens

Diana Gomes, Teresa Moreira, Marlene Mota, Cecília Rodrigues, António Araújo, Manuela Amorim

Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal

Correspondence: Manuela Amorim (mas@ess.ip.pt)

BMC Health Services Research 2018, 18(Suppl 2):P12

Background

The management of bathing water aims at the protection of human health and the preservation, protection and improvement of the quality of the environment [1, 2]. In order to control the quality of these same waters for recreational use, microbiological indicators of faecal contamination are monitored, according to Decree-Law 135/2009 of June 3rd [1]. The microbiological indicators of faecal contamination used are Escherichia coli and Enterococcus spp, since they are commensals of the gastrointestinal flora of humans and most animals [3].

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Conclusions

In an initial study and applying criteria that will then have to be more extended in terms of time, there is a first tendency for most of the inland bathing waters under study to present "Bad" quality (76.90%). Since all bathing waters should have at least "Acceptable" quality and provisional data, these results indicate an urgent need to take measures in order to counteract this and increase the number of bathing waters classified as "Excellent" or "Good." The different E.coli and intestinal Enterococcus counts observed in different months showed that climatic, environmental, social and urban factors could be involved in this differences and deserves attention in future studies [2, 4]. The quality of bathing water is fundamental in terms of public health. In this sense, the results of this study are worrisome, however these studies should be conducted in a longer time perspective.

References


Keywords

Inland bathing water, Fecal contamination indicators, Escherichia coli, Enterococci intestinal.
Background
Food-borne substances are a major concern of Public Health, given that food can be the source of various hazards (biological, physical and chemical). Approximately 20% of outbreaks of food-borne illness are associated with the personal hygiene of food handlers. The personal hygiene of manipulators is one of the best ways to block bacterial contamination and its extension to new areas [1, 2].

Objective
To evaluate the microbiological profile of the hands of food handlers in school canteens of the northern region of Portugal during 2016 and to verify the efficiency of the hygiene processes.

Methods
Handlers and utensils were tested using a swab soaked in Maximum recovery diluent-Histidine Lecithin and Polysorbate (MRD-HLPS) rubbing against parts were food might get retained, following ISO 18593: 2004 [3]. The parameters evaluated were coliforms at 37°C/24h, Escherichia coli at 44°C/24h and coagulase positive Staphylococcus at 37°C/48h, according to ISO 4832:2006 [4], ISO 16649-2:2001 [5] and ISO 6888-1:1999 [6], respectively. A statistical analysis of the results of the microbiological profile evaluation was carried out at the hands of the food handlers of primary public school canteens.

Results
Our results of the microbiological profile of the hands of food handlers showed that 9.95% of samples analysed had bacterial contamination. Most of the samples with bacterial contamination were caused by the presence of coliforms, followed by coagulase positive Staphylococcus. Only one sample was registered with positive E. coli. It was not found a significant difference in the proportions of samples with bacterial contamination and positive for coliform bacteria and coagulase positive Staphylococcus, in the distribution line and in the kitchen, over the several months.

Conclusions
The food handler is an important and recognized source of bacterial contamination of foodstuffs [1, 2]. The results of the present study indicate the necessity to implement measures to control bacterial contamination in the hands of manipulators of school canteens, aiming at correcting possible flaws encountered. Food legislation, the Hazard Analysis and Critical Control Point (HACCP) system, and reference documents such as the Codex Alimentarius and the Food Code present guidelines to promote improved food hygiene and personal hygiene for handlers [2, 7].

Keywords
Food safety, Food handlers, Hand hygiene, Microbiological evaluation, Bacterial contamination.
Background

Population ageing is a reality that has contributed to the increase of chronic diseases and the number of dependent people with wounds, with the need of home care. This issue has implications in family dynamics. It is important to take care not only of the person with the wound but also of its family. These new health needs led to the reorganization of primary health care, where family nurses emerged as essential professionals.

Objective

The aim of this study is to know the perception of family nurses of ACeS Baixo Vouga about their care with families of patient with wounds, in domiciliary context, and the importance given to this nursing practice with families. On the other hand, to identify the factors that nurses consider as barriers or facilitators in their work with families.

Methods

It was made a quantitative, descriptive and correlational study. The instrument used for data collection was a questionnaire with two parts. The first part aimed to characterize the sample with the sociodemographic and professional data of the participants, while the second one was built with two questions and the scale of the Perception about Family Nursing. The sample consisted of 150 nurses working in primary health care, in USF or UCSP, of ACeS Baixo Vouga, ARSC. Data processing was made by a descriptive and inferential analysis using the Statistical Package for Social Sciences (SPSS) and a qualitative analysis through content analysis.

Results

The results for the subscale Perception of Family Nursing Practice (PFNP) showed that the nurses selected “often” in most of the questions. The PFNP isn’t affected by sociodemographic and professional variables. This subscale is only affected by the nurses’ formation variable. The nurses with curricular formation on family have higher level of applicability of the family nursing in practice. For the subscale Importance Assigned to Family Nursing (IAFN), the most relevant category was “Important”. The IAFN is affected by sociodemographic, professional and formation variables. The group of nurses with a higher degree of education give more importance to family nursing.

Conclusions

Nurses attribute a higher level of importance on the nurse’s care with families of patient with wounds in the domiciliary context than on the applicability of the family nursing in practice. The characteristics of nursing care are the most relevant facilitator factor for family nursing practice. The characteristics of the institution are the most mentioned as a barrier factor.

Keywords

Family nurse, Family, Home care, People with wounds.

P15

Physical resilience as a key concept in the prevention of frailty in the elderly

Rafael Bernardes, Cristina L Baixinho

Lisbon Nursing School, 1700-063, Lisbon, Portugal

Correspondence: Rafael Bernardes (rafaelavesbernardes@gmail.com)

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Background

The concept of frailty has been presented in the literature in a variety of ways [1-5] and in close relation with negative health outcomes, such as gait difficulty, falls and weight loss [1, 5]. The correct assessment of frailty in the elderly and the design of an adequate care plan is essential for the provision of personalized care and assistance to caregivers [1-3]. Recent studies associate this concept with physical resilience, as a personal characteristic that determines the capacity to resist functional decline or restore physical health, being a central aspect in active aging [6].

Objective

Identify the characteristics of physical resilience that modify (positively or negatively) the fragility of the elderly.

Methods

Integrative literature review (RIL) to answer the question “How can physical resilience influence frailty in the elderly?”

Results

Fragility, although a significant syndrome linked to the natural aging process, can be modified [2]. The contextual factors of each person, if well evaluated and controlled, can improve functionality not only physically but also cognitively and socially. Interventions that reduce vulnerability and adverse outcomes reduce the risk of hospitalization. The ability of an elderly person to withstand external stress is strongly related to the physiological reserve [5-6]. Taking into account that one of the main components of the frailty phenotype is sarcopenia, many of the interventions must be operationalized in order to prevent it [6]. The phenomenon of loss of functionality and muscle mass is not an isolated phenomenon [5] and produces negative functional outcomes such as difficulty in climbing stairs, getting up from a chair or bed and lifting heavy objects. The optimization of physical resilience can happen through the design of programs of physical exercise, nutrition, therapeutic reconciliation, psychoeducational support and support by health professionals.

Conclusions

Physical resilience is also influenced by factors common to frailty. The main constraint of physical resilience that affects fragility is the physiological reserve. Resilience can be quantified in three ways by determining functional trajectories: "resilient" (without functional changes after adverse events) or "resilient" (functional decline with subsequent recovery) by Physical Resilience levels: "fragile phenotype" vs "robust phenotype" and by determining "chronological age" versus "biological age". This possibility of quantification "opens" the door for the development of interventions to treat fragility.

References


Keywords

Motor activity, Nursing, Sarcopenia, Frail elderly, Dependence.
P16
Safety Protocol for Nasolaryngoscopic Evaluation of Swallowing: cultural and linguistic validation and adaption for European Portuguese language
Liliana Abreu¹, Pedro S Couto², Susana Mestre³
¹Faculty of Medicine, Lisbon University, 1649-028 Lisbon, Portugal; ²Center for Research and Development in Mathematics and Applications, Department of Mathematics, University of Aveiro, 3810-193 Aveiro, Portugal; ³University Hospital Center of Algarve, 8000-386 Faro, Portugal
Correspondence: Pedro S Couto (p.s.a.couto@ua.pt)
BMC Health Services Research 2018, 18(Suppl 2):P16

Background
In practice, a Speech Therapist works with several neurological diseases that present changes in swallowing, especially after acute stroke. These changes, called dysphagia, can lead the patient to death by leading to malnutrition, dehydration, tracheal aspiration and recurrent pneumonia [1]. Since most of these cases are diagnosed in a hospital setting, it becomes increasingly important to create working tools that help health professionals to perform more rigorous therapeutic evaluations and interventions.

Objective
The present study aims to contribute to the cultural and linguistic validation and adaptation of the Protocol of Security of a Nasolaryngoscopic Evaluation of Swallowing (PSAND).

Methods
The study comprises two parts: a qualitative part, that corresponds to the translation and adaptation of the protocol to European Portuguese Language, and a quantitative part, where the psychometric characteristics of the protocol were studied. Further details about translation and adaptation of the protocol can be found in [2], specially the content validity procedures and its application in a pilot study. A severity assessment scale [3] was used for the functional evaluation of the swallowing safety by classifying the swallow of the subjects as normal, penetration or aspiration. For data collection, it was used the Portuguese adaptation of the PSAND and the nasolaryngoscope as evaluation tools. The content validity index (CVI) was calculated for the qualitative part, and t-student or qui-squared tests were used for comparison between severity groups.

Results
The sample consisted of twenty subjects, where all of them have an acute stroke as clinical diagnosis whether or not having dysphagia. The age of the inquired ranged from 31 to 85 years old, being 16 males. The results obtained by the panel of experts allowed us to conclude that all the parameters are relevant to the evaluation of swallowing and important to determinate a safe feeding for each patient. There were statistically significant differences (p < 0.05) between the two groups for the variables: dependent or independent feeding; poor oral control; lot of residues; reduction of laryngeal sensitivity; leaking of the bolus and difficulty in cleaning pharyngeal residues.

Conclusions
In summary, we can say that the application of this protocol is an asset to diagnose the presence of dysphagia in any clinical diagnosis, evaluate the swallowing function, verifying the risk of penetration and aspiration and classifying the Dysphagia Severity.

Acknowledgements
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References

Keywords
Swallowing, Dysphagia, AVC, Evaluation, PSAND.

P17
Trend in obesity in an aging society: estimate of obese elderly in Brazil in 2030
Adriane Carvalho, Roger S Rosa, Scheila Mai, Rita Nugem, Ronaldo Bordin
Federal University of Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, 90040-060, Brazil
Correspondence: Adriane Carvalho (adrianeedasc@hotmail.com)
BMC Health Services Research 2018, 18(Suppl 2):P17

Background
Population aging and the increasing longevity of older people are increasingly relevant worldwide phenomena [1]. In addition, along with aging, a significant increase in the prevalence of obesity among the elderly is also occurring [2,3].

Objective
To estimate the increase in the number of obese individuals, due exclusively to population aging in Brazil from 2014 to 2030.

Methods
The number of obese adult Brazilians was obtained by extrapolation of the prevalence estimated by VIGITEL (Surveillance System for Risk and Protection Factors for Chronic Diseases by Telephone Inquiry) [4] in Brazilian capitals, in 2014, for the entire Brazilian population. The population projection for 2030 by age groups was obtained from IBGE (Brazilian Institute of Geography and Statistics) [5]. The prevalence obtained by VIGITEL in 2014 was applied to population projections by 2030, maintaining all other variables constant, with 95% confidence intervals (95% CI).

Results
The Brazilian pediatric population (18-years) corresponded to 144.5 million people in 2014 of whom 15.5 million (10.7%) were 65 years of age or older. Obese adults accounted for 25.9 million (95% CI 24.9-27.0 million) of the entire adult population (17.9%), of which 3.1 million (95% CI 2.8-3.3 million) were elderly obese. The obese elderly corresponded to 11.9% of adults with obesity. In 2030, it is estimated that the Brazilian adult population will reach 175.2 million people, of whom 30.0 million (17.1%) are elderly. Obese will correspond to 31.4 million (95% CI 30.1-32.8 million) of adult Brazilians of whom 5.9 million (95% CI 5.4-6.4 million) will be obese elderly. That is, exclusively due to aging, it is expected an increase of 5.5 million obese for the entire population. An estimated 2.8 million more are obese in the age group of 65 and over. Therefore, it is expected that the percentage of 11.9% of elder obese adults in 2014 will rise to 18.9% in 2030.

Conclusions
Considering only the effect of aging with current levels of obesity prevalence, it is estimated that there will be an increase of almost 3 million obese people in Brazil by 2030. The impact of the increase in prevalence itself was not considered, which would make the prospect even more worrying due to the impact on chronic non-communicable diseases and in the use of health services.

References


Keywords Obesity, Aging, Tendencies, Population projection, Demography.

P18 Nursing interventions towards the hospitalized elderly patient with delirium – a systematic review of literature
Marta Bento, Rita Marques
Universidade Católica Portuguesa, 1649-023 Lisboa, Portugal
Correspondence: Marta Bento (marsofia81@hotmail.com)

BMC Health Services Research 2018, 18(Suppl 2):P18

Background Delirium is one of the most prevalent neuropsychiatric syndromes in the hospital setting, preferably in the elderly debilitated patients. It is a cognitive alteration of sudden onset, developing in a matter of hours or days; which is interspersed with periods of lucidity and also characterized by disturbances in attention, memory and behaviour. It is also identified by the worsening of the symptoms at night and by changes in the sleep-wake cycle. The presence of this syndrome, makes impossible a holistic care, upsetting an effectively communication, between patient and nurse or family. It may even be considered common for an elderly, given the age, to appear confused, but it should not be considered normal, so investing in concrete studies to specify these mental changes and determinate what interventions are more appropriate for this vulnerable group, is emergent. It is up to nurses, who are in a privileged position, the early recognition/intervention at this neurological condition. It is assumed as an emerging need, to implement non-pharmacological strategies, so that the occurrence of delirium decreases and thus avoids great suffering.

Objective This study aimed to identify the nursing interventions directed to the hospitalized elderly, for the control and prevention of delirium.

Methods Using the methodology recommended by the Cochrane Centre, this systematic review of literature was guided by the following research question: "What is the scientific evidence regarding nursing interventions directed to the hospitalized adult/elderly for the control of delirium?" Using a PICO framework as reference, a review of articles published between 2012 and 2017 was carried out. The research was conducted at B-ON and EBSCO host - Research Databases.

Results In this bibliographic review 5 studies were selected, in common, they present tendentially, non-pharmacological strategies adopted by nurses with preventive character towards the predisposing and precipitating factors of delirium. The role of nursing in carrying out preventive actions was important in the maintenance of the sensorial balance (frequently reorientation, encouraging the use of visual and hearing aids improves patients ‘sensorium’), optimizing circadian rhythm (minimizing night procedures, allowing periods of rest), assessing the local environment (limiting background noise and light) as well as in the mental status, pain, monitoring hydration, nutrition and stimulation of early mobility.

Conclusions The implementation of nursing delirium preventive measures truth sensibilized professionals reveals to be effective in reducing the incidence of delirium. Research is imperative, to recognize and validate which interventions may better control delirium and thus reduce its consequences.

Keywords Delirium, Nursing interventions, Hospitalized adult patients, Evidence-based practice.

P19 Distribution of gama-chamber nuclear equipment is associated to the distribution of physicians in the state of Rio Grande do Sul, Brazil
Patrícia Silva, Roger S Rosa, Rita Nugem, Adriane Carvalho, Ronaldo Bordin
Federal University of Rio Grande do Sul, 90040-060 Porto Alegre, Rio Grande do Sul, Brazil
Correspondence: Patrícia Silva (patriciairan@ig.com.br)

BMC Health Services Research 2018, 18(Suppl 2):P19

Background The use of effective technologies extends the resolution of health services. However, over-supply can create incentives for service over-use, which is not without risk to patients. Nuclear medicine equipment has been increasingly used. Knowing the associations with their spatial distribution can contribute to interventions aimed at reducing inequalities.

Objective To dimension the association among mean number of equipment’s of gamma-chamber, population, Gross Domestic Product and number of physicians, by health region of Rio Grande do Sul, state of southern Brazil.

Methods Observational and cross-sectional descriptive study based on public data from each one of the 30 health regions for 2013, the most recent year at the time of the survey (2016-2017). Data was managed in Microsoft Excel®. Pearson’s linear correlation coefficient and multiple linear regression analysis were used with Statistica 12.5® software, at a significance level of 5%. The variable considered for outcome was monthly mean of gamma camera equipment (GamaC) and the predictor variables (I) population (POP), expressed in number of inhabitants; (II) Gross Domestic Product (GDP), expressed in the national coin (Real); and (III) the number of physicians registered in the CNES - National Register of Health Establishments (MED) by health region of the State Health Secretariat, in 2013.

Results The predictive variables POP, GDP and MED were each one highly correlated with GamaC (R = 0.94, 0.92 and 0.98 respectively). Simple linear regressions with each independent variable were elaborated. It was found that POP, PIB and MED significantly affected the GamaC variable (adjusted R² of 0.89, 0.84 and 0.96 respectively). In the final model, where variables were standardized and GamaC was considered to be simultaneously dependent on the predictive variables POP, GDP and MED, the POP variable lost significance (p > 0.05). The variable PIB presented a negative coefficient (-0.54, p < 0.01), while the variable MED, a positive (1.27, p < 0.01).

Conclusions Health regions of the state that had the highest number of physicians, had the highest mean number of scintigraphic chambers. The growth in the supply of medical equipment such as nuclear medicine improves the population’s access to services, but the greater supply in Rio Grande do Sul state was associated more with better developed health regions, when considering the number of medical professionals available, than the gross domestic product or the number of residents in the territory.

Keywords Nuclear medicine, Supply, Health needs, Demand of health services.

P20 Family experiences of the internalized person in situation of critical illness: integrative revision
Raquel MV Ramos, Ana CR Monteiro, Silvia P Coelho
Instituto de Ciências da Saúde, Universidade Católica Portuguesa, 4169-005 Porto, Portugal
Correspondence: Raquel MV Ramos (raquel_mvr@hotmail.com)

BMC Health Services Research 2018, 18(Suppl 2):P20

Background The admission of a patient to a critical health unit is usually traumatic for the family, having a major impact on their life, which can
result in a moment of crisis, an anxiety enhancer. Fear of death, uncertainty of the future, emotional disturbances, financial worries, changing roles and routines, and the hospital environment are some sources that provide anxiety of a person’s family in critical illness [1].

**Objective**

To know the existent evidence about Family Experiences of the Person hospitalized in Situation of Critical Illness.

**Methods**


**Results**

In total, 7 were selected and 4 articles were analysed in full. From the literature, it emerges that the family of the person hospitalized in a critical illness has experiences and needs consequent to this situation, in which it is necessary an intervention from the professionals to support/to encourage during this traumatic transition of the familiar life [2]. The family has its own needs, and these must be met to effectively manage the situation of instability of the family member. Since the family directly influences the evolution of a person’s condition in a critical illness situation, it is important to see the family also as a target of care, in a holistic view of caring [3]. The main areas of need experienced by the family are: information on the clinical situation, assurance of patient safety, support by health professionals and willingness to be close to the patient [2].

**Conclusions**

Health professionals should be aware that the family is also a target in care, and that, in a multidisciplinary team, nurses are the most qualified professionals to plan and develop interventions to meet and respond to the family needs of the person hospitalized in critical illness [4]. The team must be able to respond to the identified family needs, through interventions to attenuate and help them to live the moment of hospitalization, making it the least traumatic possible, involving the relatives in the care, through the clarification of doubts and by helping to manage emotions and expectations [3].

**References**

2. Kinrade T, Jackson A, Tomnay J. The psychosocial needs of families and by helping to manage emotions and expectations [3].

**Keywords**

Needs assessment, Family, Critical Illness.

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**P21**

Cannabidiol oil vs ozonized extra virgin olive oil in the upp treatment of category ii

Carlajiménez, Carolina Jiménez, Francisco J Hernández-Martínez, María C Jiménez-Díaz, Juan F Jiménez-Díaz, Bienvenida C Rodríguez-De-Vera, María del Carmen Jiménez-Díaz, Bienvenida del Carmen Rodríguez-De-Vera

1Universidad de Jaén, Universidad de Jaén, 23071 Jaén, España; 2Universidad de Las Palmas de Gran Canaria, 35015 Las Palmas de Gran Canaria, España

**Correspondence:** Carla Jiménez-Rodríguez (carlajimenezrodriguez@gmail.com)

**Background**

Pressure ulcers (UPP) Category II are shallow open wounds. The phytotherapeutic treatments for them are based on healing and antisepptic action. This effect is produced by cannabidiol oil. Also, extra virgin olive oil (EVOO) ozonized has repairing properties with germicidal power.

**Objective**

To determine the effectiveness of cannabidiol oil versus EVOO in the treatment of UPP.

**Methods**

Clinical trial with 60 users with UPP Category II. After the informed consent of the patients, data collection was done in September 2017. Criterion of inclusion: it was essential that each of the users had at least two chronic wounds with the same injury (Category II), in order to apply in each one a product. We excluded users with vascular disease or in situations of extreme severity. Each user included in the study was followed for 20 days. Skin assessment and initial risk assessment was performed with the Braden scale by the principal investigator and another investigator of the team. Subsequently, the skin condition of the patients was evaluated daily, before the application of the product, by the nurse who attended them. Additionally, the patients were evaluated every 7 days by two investigators. The SPSS 25.0 program was used for statistical calculations, considering a level of significance of p < 0.05.

**Results**

Average age 71.45 ± 1.27 years. Of a total of 137 chronic wounds, 56.93% were located in the lower limbs. Regarding the resolution of the wounds, no significant differences were found between the two products, since 68.61% of the lesions improve significantly using both products before 72 hours, and all of them heal at the most in 8 days. It did not appear topically on the skin, no allergic reaction due to the use of both products, and the application of cannabis oil on the wound was very well tolerated by patients (p < 0.37).

**Conclusions**

Cannabidiol oil is shown to be as effective as EVOO in the treatment of UPP Category II, both being a good alternative to traditional therapies. In addition, the moisturizing, emollient and anti-inflammatory properties of the two products preserve the perilesional skin in perfect condition. Cannabidiol oil achieves a more favourable analgesic response in patients during wound healing.

**Keywords**

Pressure ulcers, Cannabidiol oil, Extra virgin olive oil ozonized, Traditional therapies.

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**P22**

Microbial colonization of experimental ulcers in the laboratory animal treated with cannabidiol oil

Carlajiménez, Carolina Jiménez, Carmelo Monzón-Moreno, Juan F Jiménez-Díaz, María del Carmen Jiménez-Díaz, Bienvenida del Carmen Rodríguez-de-Vera

1Universidad de Jaén, Universidad de Jaén, 23071 Jaén, España; 2Universidad de Las Palmas de Gran Canaria, 35015 Las Palmas de Gran Canaria, España

**Correspondence:** Carla Jiménez-Rodríguez (carlajimenezrodriguez@gmail.com)

**Background**

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**Objective**

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**Methods**

Clinical trial with 60 users with UPP Category II. After the informed consent of the patients, data collection was done in September 2017. Criterion of inclusion: it was essential that each of the users had at least two chronic wounds with the same injury (Category II), in order to apply in each one a product. We excluded users with vascular disease or in situations of extreme severity. Each user included in the study was followed for 20 days. Skin assessment and initial risk assessment was performed with the Braden scale by the principal investigator and another investigator of the team. Subsequently, the skin condition of the patients was evaluated daily, before the application of the product, by the nurse who attended them. Additionally, the patients were evaluated every 7 days by two investigators. The SPSS 25.0 program was used for statistical calculations, considering a level of significance of p < 0.05.

**Results**

Average age 71.45 ± 1.27 years. Of a total of 137 chronic wounds, 56.93% were located in the lower limbs. Regarding the resolution of the wounds, no significant differences were found between the two products, since 68.61% of the lesions improve significantly using both products before 72 hours, and all of them heal at the most in 8 days. It did not appear topically on the skin, no allergic reaction due to the use of both products, and the application of cannabis oil on the wound was very well tolerated by patients (p < 0.37).

**Conclusions**

Cannabidiol oil is shown to be as effective as EVOO in the treatment of UPP Category II, both being a good alternative to traditional therapies. In addition, the moisturizing, emollient and anti-inflammatory properties of the two products preserve the perilesional skin in perfect condition. Cannabidiol oil achieves a more favourable analgesic response in patients during wound healing.

**Keywords**

Pressure ulcers, Cannabidiol oil, Extra virgin olive oil ozonized, Traditional therapies.
on experimental total skin ulcerative lesions in the adult male white rat, Sprague Dawley strain. Ten animals were used for each group under standard laboratory conditions. After anaesthesia with 100% isoflurane, a total skin wound was performed in the region of the back with a disposable surgical punch of 6 mm in diameter. Subsequently, they are distributed in individual cages to prevent them from licking each other and with sufficient height to prevent the friction of the cutaneous ulcer with the passenger compartment. 0.15 ml of the respective product was applied daily to the ulcers. The microbiological analysis was carried out by studying the variation of the bacterial microbiota. The colony-forming units of each wound were determined by counting on a plate, after obtaining a total skin sample and a superficial sweep. The organic samples obtained were placed in sterile tubes containing 1 ml of physiological serum to which vortex was applied for 30 seconds, serial dilutions being made to the tenth of the samples subject to titration. Six plates of Tryptic Soy Agar (TSA) were then labelled, one for each dilution obtained, and 0.1 ml of each of these dilutions was added, spreading it on the surface of the plate by means of the sowing handle. Plates were incubated in an oven at 37°C for twenty-four hours and then the colony forming units were counted.

Results
Two hundred fourteen different colonies were obtained. The majority genus was Staphylococcus. There was no difference in microbial colonization due to the products used in each group, i.e., physiological serum, EVOO and CBD.

Conclusions
The analysis of the mesophilic cutaneous microbiota shows a microbial colonization rich in gram-positive organisms, the majority being the presence of coagulase-negative staphylococci (CNS) that behave as opportunistic pathogens in skin continuity solutions.

Keywords
Colonization, Microbial cannabinoid, Skin, Ulcer, Rat.

P23
The impact of dermatologic and cosmetic counseling - case study
Stefany Moreira1, Ana Oliveira2, Rita Oliveira2,3, Cláudia Pinho1, Agostinho Cruz1
1Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal; 2Centro de Investigação em Saúde e Ambiente, Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal; 3Seção Autónoma de Ciências da Saúde, Universidade de Aveiro, 3610-193 Aveiro, Portugal
Correspondence: Stefany Moreira (fany_hill@hotmail.com)
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Background
Community pharmacy professionals (CPPs) have been recognized as the most accessible and best-positioned health professionals for the provision of pharmaceutical counselling [1]. This happens due to the easy access to pharmacies, and because their interventions translate into: beneficial clinical results; satisfaction of users; reduction of costs and prevention of problems or negative reactions to medicines [1, 2]. The sale of dermatological products and symptoms associated with skin problems has a considerable impact on sales and advice requirements in pharmacies, respectively [3].

Objective
To demonstrate the importance of CPPs through the quantitative evaluation of the impact of dermatologic and cosmetic counselling; and to determine which dermatological/cosmetic areas affect most people and what motivates them to turn to this type of counselling.

Methods
Prospective, longitudinal and an observational case study. It took place in a pharmacy in the city of Porto, between January and April 2017. It had 3 phases: I) invitation (where were explained the objectives and the methodology); II) first Interview: Completion of PART I of the Questionnaire (description of the situation and the advice provided by the CPP); III) second Interview: Completion of PART II of the Questionnaire (evaluation of the result of the counselling).

Results
Of the 16 analysed situations: 62.50% were resolved and/or people were satisfied, 31.25% were in the process of improvement, and 6.25% were not resolved and/or people were not satisfied. The three most mentioned dermatological/cosmetic areas in the requests for counselling were: daily skin care (37.50%); marks, spots, comedones, pimples or signs on the skin (18.75%) and sun protection (12.50%).

Conclusions
CPPs have proven to be very valuable in providing counselling on dermatologic products and cosmetics, where, this had a positive impact. The dermatological/cosmetic area that most had expression among the requested situations was daily skin care.

References

Keywords
Community pharmacy professionals, Counselling, Dermatologic products, Cosmetics.
interventions that improve the ability of the person to administer medication, with or without the use of devices; by different routes; and to monitor some physiologic parameters related to the medication taken. We believe this will be a first contribution to the representation of the nursing knowledge in this area.

References

Keywords
Self-management, Medication regime, Nursing diagnosis, Nursing information systems.

P25 Antioxidant activity of Artemisia annua L
Rita Vieira 1, Cláudia Pinho 2, Ana I Oliveira 1, Rita F Oliveira 1,2,3, Agostinho Cruz* 2
1 Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal; 2Centro de Investigação em Saúde e Ambiente, Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal; 3Secção Autónoma de Ciências da Saúde, Universidade de Aveiro, 3810-193 Aveiro, Portugal
Correspondence: Cláudia Pinho (clp@eu.ipp.pt)
BMC Health Services Research 2018, 18(Suppl 2):P25

Background
Tea infusions of Artemisia annua are known for their prophylactic and therapeutic efficacy against malaria [1]. However, recent studies have revealed that A. annua possesses a variety of pharmacological activities such as antibacterial, cytotoxic and antioxidant [2, 3].

Objective
This study aims to evaluate antioxidant activity of A. annua plant obtained from two different manufactures, prepared using different solvents.

Methods
A. annua leaves (obtained from two manufactures) were extracted with two solvents (water and 70% ethanol), and antioxidant activity of the extracts were screened using superoxide and 1,1-diphenyl-2-picrylhydrazyl (DPPH) radical scavenging activities, and Metal chelating activity.

Results
The extracts tested not only showed ability to bind to iron ions but also demonstrated ability to inhibit free radicals. Results showed that antioxidant activity increased with increasing concentrations of the extracts studied. The IC50 values of A. annua aqueous extract (infusion), obtained from manufacture A, for DPPH and superoxide radical scavenging activities, and Fe2+ chelating activity, ranged from 29.3 to 176.6 μg/mL. For the hydroalcoholic extract, IC50 values ranged from 28.0 to 262.1 μg/mL (all above standards). The IC50 values of A. annua aqueous extract (infusion), obtained from manufacture B, for superoxide and DPPH radical scavenging activities, and Fe2+ chelating activity, ranged from 6.9 to 282.0 μg/mL. For the hydroalcoholic extract, IC50 values were 40.4, 46.8 and 50.5 μg/mL for Fe2+ chelating activity, superoxide and DPPH radical scavenging activities, respectively. Only the aqueous extract, obtained from manufacture B, showed an IC50 value (6.9 μg/mL) for the superoxide radical scavenging activity, lower than positive control (20.6 μg/mL - ascorbic acid).

Conclusions
This study confirms the differences in antioxidant activities using different solvents, suggesting that the solvent effect should be taken into account in the evaluation of the antioxidant potential of any sample. However, the origin of the plants including the pre- and post-harvesting practices can be also important for their chemical composition, resulting in different values for the same antioxidant assays and solvents.

References

Keywords
Artemisia annua, Antioxidant activity, Solvent extraction, DPPH, Superoxide anion radical, Metal chelating activity.

P26 Swimming pool users and behaviors: practices and motivations
Daniel A Marinho 1,2, Luis F 3, Luís M Marques 1,2, António Sousa 1,2, 3, Henrique P Neiva 1,2
1 Department of Sport Sciences, University of Beira Interior, 6201-001 Covilhã, Portugal; 2Research Center in Sports Sciences, Health Sciences and Human Development, University of Tras-os-Montes and Alto Douro, S001-801 Vila Real, Portugal
Correspondence: Daniel A Marinho (marinho.d@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):P26

Background
Health and sports professionals have recommended water-based exercises as an alternative to traditional dry-land exercise, leading to an increase in physical exercise performed in an aquatic context. The properties of the aquatic environment, combined with the resistance of the water during all movements, make it beneficial for health-related parameters and physical fitness [1]. However, research is needed to understand the practices of different populations, according to the specificity of some activities. Few is known about people's practices in these particular activities.

Objective
The purpose of this study is to characterize Portuguese practices and motivations to use the swimming pools and to exercise in-water physical activities.

Methods
Subjects from the interior region of Portugal, swimming pool users, completed a questionnaire consisting of 33 questions. Those questions were focused on the characterization of their usual in-water activities, and main motivations.

Results
Until now, 418 swimming pool users answered the questions, ranging from 18 to 79 years old (44.7% females, 55.3% males). Most of them were active and only 67 subjects were retired from work. They used to practice aquatic actives for more than 2 years (60%), and the majority twice-a-week, preferring the evening time to attend the swimming pool. Among the various types of swimming pool use, it was verified that 31% perform water aerobics, 48% swimming classes and 31% free time schedules. More than half of the sample only performed aquatic activities (54%) and aimed to improve health (47%), physical fitness (31%) and 11% to relief stress. Curiously, only 1% wanted to learn how to swim. They classified the physical activities performed in-water in the last few weeks mostly of moderated/vigorous intensity. People who attend to swimming pools are persistent and committed with aquatic exercitation, practicing for more than 2 years. Although most of them participate in swimming or water aerobics lessons, there is still a considerable number of free-time users and swimming pools must be prepared for this fact. Interestingly, the majority attend to swimming pool to improve health and physical fitness.
Conclusions
This pilot study will be implemented in several other regions of the country and this would allow to understand the motivations and needs of users and to improve offers and support to other areas of research (i.e., development of technological devices).

Acknowledgements
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References

Keywords
In-water activities, Questionnaire, Physical activity.

P27
Critical patient’s comfort: Strategies to reduce environmental noise levels
Telma Ramos, Filipa Veludo
School of Nursing, Institute of Health Sciences, Universidade Católica Portuguesa, 1649-023 Lisbon, Portugal
Correspondence: Telma Ramos (telmaramos_24@hotmail.com)
BMC Health Services Research 2018, 18(Suppl 2):P27

Background
Noise may have harmful effects. For critically ill patients, highlights have main consequences cardiovascular disorders, reduction of arterial oxygen saturation, increase in gastric secretion, stimulation of the pituitary gland, sleep disturbance, immunosuppression and reduction of the cicatrisation process [1]. Noise has an overall negative impact on patients’ recovery. Identification and dissemination of strategies to reduce environmental noise empowers nurses towards changes in their professional practice.

Objective
Identify evidence in Literature of nursing care strategies to reduce environmental noise in critical patient care. Methods
This research was conducted in two phases. 1st Phase: Mediated by an integrative literature review (16/04/2017) we carried out database research through the Academic Search Complete; Complementary Index; CINAHL Plus with Full Text; Directory of Open Access Journals; Supplemental Index; Psychology and Behavioural; Sciences Collection; SPORTDiscus with Full Text; RCAA P; Scielo; Europeana; Business Source Complete; Education Source; IEEE Xplore Digital Library; MedicLatina; JSTOR Journals; PsycaRTICLES; ScienceDirect. Descriptors: TI (Noise* or sleep*) AND (Nurs* AND (intervention or care or patient care or care plan* or critical care), non-temporal. Inclusion criteria: Primary, secondary, opinion/reflexion studies. Exclusion Criteria: Paediatrics context, REM, pharmacological intervention. From the initially 441 articles obtained, we excluded 391 by reading abstracts, 22 by summary and 15 by the complete text, concluding with 13 articles as final sample. 2nd Phase: Content analysis according to [2] in order to categorize results.

Results
We have identified 6 feasible categories for environmental noise reduction, which we present as main strategies: Behavioural changes (creation of awareness to the importance of the tone of voice and silent handling of equipment and materials); Material and Equipment management (mobile phones, televisions and radios volume configuration; determination of correct parameters for alarm configuration); Management of silence promotion care (implementation of periods of silence, avoid noisy tasks); Training in environmental noise (behavioural change programs and health education about negative effects of noise); Care quality control (usage of ear plugs); Others (infrastructural adaptations, encourage suppliers to produce more silent products).

Conclusions
This study systematizes strategies to be implemented by nursing professionals in order to reduce environmental noise within health structures and improve patient comfort. The implementation of a silence culture enables an adequate and essential physical environment to patient recovery [3]. Empower nurses with the identified strategies allows the improvement of people’s quality of life. The shortage of published research reflects the need of forward research.

References

Keywords
Noise, Comfort, Integrative literature review, Content analysis.

P28
Nurse-patients’ family interaction in ICU and the establishment of effective therapeutic partnerships: vulnerability experienced and clinical competence
Anabela Mendes (anabelapmendes@esel.pt)
Escola Superior de Enfermagem de Lisboa, 1600-190 Lisboa, Portugal
BMC Health Services Research 2018, 18(Suppl 2):P28

Background
When faced with a negative event such as the situation of a critical illness, nurses and patients’ family build their interaction on a daily basis [1-3]. The closeness and the joint interest in finding together the answer to their common issues motivates them for a common path, based on trust [4]. We find that nurses’ clinical exercise time and their clinical competence can influence this process [5, 6].

Objective
To analyse how family perceives the interaction between nurses and the family. To diagnose how to build a daily basis interaction when facing a critical illness, and which steps highlight the existing confidence. Having Benner’s theoretical framework as a support, we need to understand the relationship between the time spent in critical care and nurses’ clinical competence.

Methods
Qualitative study. Data collection through open interview to 12 family members, of an adult person hospitalized in ICU. The interviews content analysis was carried out according to the phenomenological approach suggested by Van Manen. The Software used for qualitative data analysis was Nvivo. This software showed the advantages of time saving and allowed to carefully explore the relationship between the data [7].

Results
Family members recognized how determinate the interaction with nurses to their daily life in the ICU was. They reported the careful construction of discourse and the effective presence with the sick person as nurses’ strategy for interaction. The need to know better the situation and to discover what will happen, motivated families to start the interaction. Trust was revealed in founded solicitude and compassion. Families know that nurses are vulnerable to their suffering. During interaction, family members noticed that clinical competence is inherent to the nurse person and not related to the time of practice.

Conclusions
The co-existence compromises nurses and family in the construction of an effective therapeutic partnership. They recognized that the information they have from the sick person, arising from different circumstances, must be shared, considering professional ethics, beliefs and values and also the relevance for the therapeutic process. It is in interaction and for the interaction that they discover vulnerability, comfort and trust each other.
References

Methods
Methodology proposed by Joanna Briggs Institute [7]. A three-step search strategy was used in this review: (I) an initial limited search was undertaken followed by an analysis of the words contained in the title and abstract, and of the index terms used to describe the article; (II) a second search using all identified keywords and index terms was undertaken across all included databases; (III) the reference list of all identified reports and articles was searched for additional studies. Studies of quantitative evidence published between 1999 and 2017 were considered for inclusion in this review. The reference list of all identified reports and articles was searched for additional studies. Studies of quantitative evidence published between 1999 and 2017 were considered for inclusion in this review. This review included patients of all ages, in any clinical setting. However, studies where patients displayed a previous vascular access device in situ were excluded. The assessment of methodological quality, data extraction and synthesis will be conducted by two independent reviewers using standardized tools recommended by the Joanna Briggs Institute [7]. Any arising disagreements will be resolved through discussion or with a third reviewer.

Results
An initial limited search of MEDLINE via PubMed and CINAHL was undertaken, using specific terms such as: catheters; cannula; “vascular access devices”; “peripheral intravenous catheterization”; “peripheral venous catheterization”; “peripheral access”; “peripheral intravenous access”; “venous access”; NIR; “near-infrared”; “infra-red”; “light”; “device”; “machine”; “ultrasonograph”; “technology”; “sonography”; “ultrasound”. Resultantly, 2,699 studies were retrieved, written in English, Portuguese, Spanish and French. Keywords and index terms are being identified in order to generate a more comprehensive search strategy (step two).

Conclusions
The critical analysis of existing data will contribute to the dissemination of the best evidence available on the subject. It is expected that this dissemination will be reflected in the definition of guidelines regarding PVC management and, consequently, in the optimization of current practices.

Acknowledgements
This protocol is part of the project “Transfer of technological innovations to nursing practice: a contribution to the prevention of infections”, funded from the European Regional Development Fund, by the Operational Program Competitiveness and Internationalization of PORTUGAL 2020.

References

Keywords
Family, Nursing, Intensive care, Interpersonal relations, Communication.
majority of validation studies with the FES-I are conducted with independent and relatively healthy community-dwelling older people, which limits extrapolation to those receiving adult day care services. Reference to higher disability and frailty is common among adult day care users compared to non-users.

**Objective**

This study presents preliminary findings of the psychometric properties of the European Portuguese version of the FES-I in a sample of older users of day care centres.

**Methods**

A cross-sectional study with a convenience sample was conducted. Data collection included a socio-demographic questionnaire, and the Portuguese versions of the FES-I and the Activities-specific Balance Confidence Scale (ABC). Descriptive and inferential statistical analyses were performed.

**Results**

A total of 100 older people users of day-care centres (81.94 ± 6.43 years old; 77% female) have participated in the study. FES-I had excellent internal consistency (α = 0.970) and test-retest reliability (ICC2,1=0.979). A significant negative correlation was found between the FES-I and the ABC (rs = -0.828; p < 0.001), indicating good concurrent validity. FES-I scores were significantly higher among those who were older, female and less educated.

**Conclusions**

The FES-I seems to be a reliable and valid measure of fear of falling for older people who are clients of adult day care services. The findings are highly comparable with those previously found for non-users of day-care centres. FES-I can be also used to prevent risk of falls in this type of care settings.

**Acknowledgements**

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**Keywords**

Falls Efficacy Scale-International, Older people, Adult day care, Fear of falling, Psychometric properties.

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**P31**

**Function-Focused Care: validation of self-effecacy, outcomes expectations and knowledge scales**

Lénia Costa 1, Pedro Sá-Couto 2, João Tavares 3,4

1Department of Medical Sciences, University of Aveiro, 3810-193 Aveiro, Portugal; 2Center for Research and Development in Mathematics and Applications, Department of Mathematics, University of Aveiro, 3810-193 Aveiro, Portugal; 3Nursing School of Coimbra, 3046-851 Coimbra, Portugal; 4Coimbra Education School, Polytechnic Institute of Coimbra, 3030-329 Coimbra, Portugal

**Correspondence:** Lénia Costa (leniacosta@ua.pt)

**BMC Health Services Research 2018, 18(Supp 2):P31**

**Background**

The nursing assistant (NA) plays an important role in maintaining the health and independence of institutionalized older adults (OA) [1]. These professionals are required to help OA to achieve and maintain their highest level of function. The Function-focused Care (FFC) is a philosophy of care that promotes the restoration and/or maintenance of physical function. In the institutional context it is relevant empowering NA to adopted this philosophy [2].

**Objective**

This study intends to analyse the perception of NA in relation to the FFC, through scales of self-efficacy, outcomes expectations and knowledge, as well as the validity and reliability related properties.

**Methods**

Quantitative approach of a descriptive/correlational cross-sectional type. A self-report questionnaire consisting of sociodemographic and professional variables and the scales of self-efficacy, expectations and knowledge were applied. Further details about the scales used can be found in Costa [3]. The validation/reliability procedures for each scale consisted in the calculation of exploratory factor analysis, Cronbach’s alpha, and in the intra-class correlation coefficient (ICC) for test/retest purposes. Correlation between the scales themselves, with feelings related to the care of elderly, and sociodemographic and professional variables were tested using the Spearman Rank test.

**Results**

The sample consisted of 73 NA (100% women) with a mean age of 46.4 (± 9.9) years from 5 different institutions. The scale of the self-efficacy showed a three-factor model with the total variance of 73.4%, Cronbach’s alpha = 85.2% and ICC = 0.80. The scale of outcomes expectations presented one factor, Cronbach’s alpha = 95.2% and ICC = 0.97. The scale of Knowledge obtained a percentage of correct answers only of 44.7%. It was not possible to develop predictive models to relate these scales in a pre-intervention situation. Also, the low correlation between the scales and feelings related to the care of OA (difficulty, gratification, physical overload and emotional overload) or sociodemographic and professional variables (age, years of experience, and self-knowledge), indicated a weak dependence between them. Finally, the institution variable showed not to be a confounding variable (that is, does not influence these results).

**Conclusions**

The Portuguese version of the scales analysed showed satisfactory data validity and reliability. These results suggest that the Portuguese version of these scales can be used to evaluate the FFC performed by the NA. These results point to the importance of implementing a FFC program in the institutions and analyse its impact on OA care and on NA.

**Acknowledgements**

This work was supported in part by the Portuguese Foundation for Science and Technology (FCT-Fundação para a Ciência e a Tecnologia), through CIDMA - Center for Research and Development in Mathematics and Applications, within project UID/NA/04106/2013.

**References**


**Keywords**

Aging, Functionality, Function-focused care, Nursing assistant.

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**P32**

**Determinant factors for the development of student competencies in the context of clinical training: one ecological perspective**

Marília Rua 1, Isabel Alarcão 2, Wilson Abreu 2

1Health School, University of Aveiro, 3810-193 Aveiro, Portugal; 2University of Aveiro, 3810-193 Aveiro, Portugal; 3Nursing School of Porto, 4200-072 Porto, Portugal

**Correspondence:** Marília Rua (mrua@ua.pt)

**BMC Health Services Research 2018, 18(Supp 2):P32**

**Background**

The growing complexity of health care settings, as well as the own care, require that training in this area is also a process thought, a dynamic perspective of integration/implementation of knowledge in each context, which is only possible if carried out in close collaboration between school and a real context of clinical practice [1]. In the light of bio-ecological perspective [2] the development of skills of the students in this context may be influenced by several factors related to the person, the process, context and time.
Objective
To understand the factors that influence the development of student's skills in the clinical training.

Methods
We selected a qualitative methodology, using a case study [3] referring to the Nursing Degree, in University of Aveiro. Data emerged from narratives of students and supervisors about their experiences on clinical context.

Results
The final results allow us to conclude that the development of abilities occurs in an integrating way, combining synergistically different dimensions and important factors related to the PCT model. For the Person - emerge the activities, the contact with suffering/death and affective-relational climate. For the Process, the proximal process is pointed out, as well as strategies of supervision. In these contexts, emerge, in the microsystem, the specificities of each context; in the mesosystem the importance goes to the multicontextual participation; in the exosystem, to the interinstitutional relationship and, at a macrosystemic, signs the influence of the policies of hospital management. With respect to time, the importance of the continuity of the proximal processes and the periodicity of the clinical teaching were observed.

Conclusions
The student's skills development is a dynamic, dialectical and progressive process which implies: continuity over time; progressive interaction with people of context-process; contexts that establish themselves as important elements in the development of students' skills at different levels.

References

Keywords
Biocultural model, Student, Competencies, Clinical training.

P34
Phytochemical screening from Rosmarinus officinalis and Ginkgo biloba leaf extracts
Aníra França1, Diana Silva1, Ana I Oliveira3, Rita F Oliveira1,4, Cláudia Pinho1, Agostinho Cruz2
1Farmácia Holon, Baguim do Monte, 4435-668 Gondomar, Portugal;
2Farmácia Higiénica, Fão, 4740-323 Esposende, Portugal;
3Centro de Investigação em Saúde e Ambiente, Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal;
4Secção Autónoma de Ciências da Saúde, Universidade de Aveiro, 3810-193 Aveiro, Portugal

Correspondence: Ana R Sousa (anaritasousa00@gmail.com)

BMC Health Services Research 2018, 18(Suppl 2):P34

Background
Comfort is an important concept and a fundamental value of nursing. Recognizing the importance of scientific evidence in practice, the importance of characterizing and understanding the ways and means of comfort centred on the needs of the client, an exploratory research was carried out with the purpose of knowing the meaning of comfort, as well as ways and forms of comfort, in order to define effective interventions that promote comfort.

Objective
To know how is evidenced the characterization of comfort and comfort in nursing are characterized

References

Keywords
Rosmarinus officinalis, ginkgo biloba, phytochemical screening, leaf extract.

P34
Systematic review - how comfort and comfort in nursing are characterized
Ana R Sousa1, Eliette Castela2, Patrícia Pontífice-Sousa2, Teresa Silveira1
1Centro Hospitalar de Setúbal, 2910-446 Setúbal, Portugal; 2Universidade Católica Portuguesa, 1640-023, Lisboa, Portugal

Correspondence: Ana R Sousa (anaritasousa00@gmail.com)

BMC Health Services Research 2018, 18(Suppl 2):P34

Background
Comfort is an important concept and a fundamental value of nursing. This is assumed to be a multidimensional, dynamic and intersubjective concept and the nursing intervention measures used to satisfy the specific comfort needs, thus comforting constitutes a competence of the nurse. Recognizing the importance of scientific evidence in practice, the importance of characterizing and understanding the ways and means of comfort centred on the needs of the client, an exploratory research was carried out with the purpose of knowing the meaning of comfort, as well as ways and forms of comfort, in order to define effective interventions that promote comfort.

Objective
To know how is evidenced the characterization of comfort and comfort in the nursing scientific literature.

Methods
Systematic review of the literature based on the recommendations of the Joanna Briggs Institute on the PICOT strategy and PRISMA recommendations. The research was performed in databases CINAHL Plus, MEDLINE, Nursing & Allied Health Collection and MedicLatina, from January 2010 to November 2017, combining the following descriptors: Comfort * AND Nurs * AND research NOT Psychiatric.

Results
Eleven studies were integrated in the review, which involved people with chronic and acute illness. Studies have shown that being
socially accepted, being physically comfortable, feeling safe, being close to significant people are some of the characteristics that qualify comfort. Regarding comfort in nursing, the findings analysed demonstrate numerous comforting strategies, namely, effective and empathetic presence, touch, smile, family integration in the care process, among others.

Conclusions
The main results, while providing data that allow us to characterize comfort and comfort in nursing, also highlight the need to investigate the focus.

Keywords
Characterization of the comfort term, Comfort care, Nursing care.

### P35

**Rotines of life and health of institutionalized young people**

Tiago Machado, João Serrano, Sergio Ibanez, Helena Mesquita, Pedro Pires

1 School of Education, Polytechnic Institute of Castelo Branco, 6000-266 Castelo Branco, Portugal; 2Faculty of Sports Science, University of Extremadura, 10003 Cáceres, Spain

**Correspondence:** Tiago Machado (tiagomachadix@gmail.com)

**BMC Health Services Research** 2018, 18(Suppl 2):P35

**Background**

Today’s society creates many limitations in the daily lives of children and young people and will have an impact on their well-being, health and quality of life. This is aggravated when we speak of institutionalized children. **Objective**

To study the leisure activities of young people institutionalized in Homes for Children and Youth and to know if these activities contribute to the development of healthy lifestyles.

**Methods**

A questionnaire was used as instrument, which was submitted to validation by specialists. The questionnaires were completed by the young people with the presence of the researcher. The sample consisted of 100 young people aged between 10 and 18 years old, belonging to 6 homes for Children and Youth.

**Results**

In the period of free time we found that in the recreations the most accomplished activities were to talk with friends (86.4%), play in the sports fields (47.5%) and dating (23.3%). Most of the young people do not participate in school sports (76.7%). The most accomplished activities after school were: watching TV (100%), cleaning the Institution (96.2%), listening to Music (89.3%), studying (87.4%), playing on the computer and on Facebook (82.6%) and doing physical activity (table tennis, football, among others) (73.8%). Regarding the accomplishment of these activities, the young people reported doing them daily or at least 2 to 3 times a week. When asked if they would like to occupy their free time within the institutions otherwise, the young people were divided, even though the majority responded that they did not (53.4%). As young people are in an open regime, we asked them which activities were most frequently carried out, outside the institution, and they answered that it was a walk with their friends (87.4%), and that the frequency of this activity was daily or at least 2 to 3 times a week. When asked if they would like to take their free time away from institutions in a different way, most of the young people said no, given that their activities are their preference.

**Conclusions**

The results showed that the young people in the study carried out activities considered healthy, which contribute to their quality of life and well-being; however, we were able to verify that they present limitations, namely, in relation to physical activity, since most of the activities performed both inside and outside the institutions had low levels of intensity and frequency, being carried out sporadically.

**Keywords**

Life and health routines, Free Time and Leisure, Children and young people at risk.

### P36

**Evaluation of pain in patients intubated orotracheally: BPS and CPOT**

Ana RQ Pinheiro, Rita Marques

1 Instituto de Ciências da Saúde, Universidade Católica Portuguesa, 1649-023 Lisbon, Portugal; 2Escola Superior de Saúde da Cruz Vermelha Portuguesa, 1300-906 Lisbon, Portugal

**Correspondence:** Ana RQ Pinheiro (queirozanarita@gmail.com)

**BMC Health Services Research** 2018, 18(Suppl 2):P36

**Background**

Pain is considered as a symptom of difficult assessment and characterization by health care providers who take care of orotracheal intubated patients (EOT) unable to communicate verbally, so their assessment is critical to an effective management of care and therapy. An EOT patient is exposed to a variety of painful procedures and, if the pain is not controlled, it can lead to multiple complications: physical (cardiovascular, neurological and pulmonary) and psychological (stress, anxiety and delirium), so nurses must have credible instruments for evaluation and monitoring.

**Objective**

This systematic literature review (RLS) aimed to identify the most reliable tool for pain assessment, by analysing the validity and reliability of the BPS and CPOT scales, as well as their ease of application.

**Methods**

Using the methodology recommended by the Cochrane Centre, this RLS was guided by the following research question: “Which is the most appropriate scale, BPS or CPOT, for pain assessment in patients unable to communicate verbally?” The seven included studies resulted from a research in EBSCO, using the terms “behavioural pain scale” and “critical care pain observation tool”, with Boolean operator “and”, in full text, published between 2007-2017.

**Results**

With a number of participants between 23 and 117, the 7 selected studies, all with quantitative nature, concluded that both scales are reliable and valid for the assessment of pain in this population [1-5]. [4] report that although BPS is more sensitive in identifying the patient’s response, CPOT is a good alternative. It was also verified that both instruments are sensitive to painful procedures, with an increase in several indicators [1, 2, 6]. There was also a significant statistically correlation between the values of arterial tension and the performance of a painful procedure, (the higher the pain value, the higher the arterial tension) [5,6].

**Conclusions**

Both scales (BPS and CPOT) are suitable for the evaluation of pain in EOT patients and according to nurses, both are easy to apply and useful for care delivery [5, 7]. However, the literature does not show the most adequate scale, suggesting that other studies must be done.

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**Keywords**

Behavioral pain scale, Critical care pain observation tool, Pain rating scales, Nursing.

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**P37**

**Analgesic effect of the topical use of cannabidiol oil in experimental ulcers in the laboratory animal**

María-del-Carmen Jiménez-Díaz 1, Carla Jiménez-Rodríguez 1, María-del-Pino Quintana-Montesdeoca 1, Juan F. Jiménez-Díaz 2, Francisco J Hernández-Martínez 3

1Universidad de Jaén, Universidad de Jaén, 23071 Jaén, España; 2Universidad de Las Palmas de Gran Canaria, 35015 Las Palmas de Gran Canaria, España; 3Cabildo de Lanzarote, 35500 Lanzarote, Las Palmas, Islas Canarias, España

**Correspondence:** María-del-Carmen Jiménez-Díaz (cjmenez@ujaen.es) BMC Health Services Research 2018, 18(Suppl 2):P37

**Background**

Since ancient times the use of the Cannabis sativa L. plant has been known in topical form for the treatment of haemorrhages, inflammations, oedema, various pains, among others. In fact, tincture and cannabids extract were sold without restriction in European and American pharmacies until the beginning of the 20th century.

**Objective**

To study the analgesic effect of cannabidiol oil (CBD) applied topically to experimental ulcerative skin lesions in the laboratory animal.

**Methods**

Experimental study with control group (with physiological saline to maintain hydration conditions and group with extra virgin olive oil (EVOO) to avoid bias with the oleic excipient), to check the analgesic effect of CB applied topically on ulcerative lesions. Experimental total skin in the adult male white rat, Sprague Dawley strain. Ten animals were used for each group under standard laboratory conditions. After anaesthesia with 100% isoflurane, a total skin wound was performed in the region of the back with a disposable surgical punch of 8 mm in diameter. They were then distributed in individual cages to prevent them from licking each other and with sufficient height to prevent rubbing of the skin ulcer with the passenger compartment. 0.15 ml of the respective product was applied daily to the ulcers. The analgesic response was assessed by obtaining latency of withdrawal of the tail of the animal under thermal stimulus through the meter LE7106 Tail-flick®. Letica®, previous impregnation of the tail of the animals of the different products used by topical friction and, after waiting for 15 minutes, the tail of each of the animals is subjected to the emission of the infrared beam. Similar action was taken with the rest of the products studied, the EVOO and the CBD. The analgesic response was practiced twice, on different days. The statistical program SPSS 25.0 was used, considering a level of significance of p < 0.05.

**Results**

There was no significant difference between the products applied to the different animals. The highest average corresponded to the application of CBD in observation and measurement 1. In observation and measurement 2, no significant difference was detected and the average values were similar between EVOO and CBD.

**Conclusions**

The most favourable analgesic response was obtained under the influence of cannabidiol oil, which also presents a greater tolerance to pain as experimentation progresses.

**Keywords**

Analgesia, Cannabidiol, Skin, Ulcer, Rat.

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**P38**

**Polypharmacy in elderly patients in a community pharmacy**

Sónia Lopes 1, Clara Rocha 1, Rui Cruz 1

1Pharmacy Department, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal

**Correspondence:** Sónia Lopes (soniabelina@gmail.com) BMC Health Services Research 2018, 18(Suppl 2):P38

**Background**

The definition of polypharmacy isn’t consensual, but all authors refer it as the simultaneous use, and the chronic way, of several drugs by the same person. Polypharmacy affects mainly elderly and it’s due to the high number of chronic diseases in this population and consequent need to take medications to control them.

**Objective**

Characterization and quantification of polypharmacy in a rural elderly population; identification of the most prescribed pharmacotherapeutic classes; evaluation of connection between polypharmacy and elderly characteristics.

**Methods**

It carried out an observational, retrospective, transversal and analytical study in a Popular Pharmacy (Pombal). 230 individuals aged 65 years old or more were surveyed and the data collection was made through a questionnaire prepared for this purpose. Major polypharmacy was defined as the chronic consumption of at least 5 different drugs.

**Results**

The elderly took, on average, 6.20 ± 2.91 drugs daily. The prevalence of Major polypharmacy was 70.4%. The most prescribed pharmacotherapeutics groups were cardiovascular and Central Nervous System. There were statistically significant differences between age and number of medications taken, as well between number of drugs and the way to identify the medication, the knowledge of the therapeutics indications, the occurrence of mistakes or take outside advised time, and the self-perception of health state (p ≤ 0.05).

**Conclusions**

In view of the obtained results, it’s concluded that polypharmacy is very high in the Portuguese population under study. It’s the persons most aged who consume a greater number of drugs. The elderly with less academic qualifications are those who have more difficulty in identifying medication and respective therapeutic indications. It’s necessary to adopt strategies in order to reduce polypharmacy, having both the prescriber and the professionals of pharmacy, a preponderant role in this task.

**Keywords**

Polypharmacy, Elderly, Chronic medication.

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**P39**

**Salivary detection of the topical use of cannabidiol oil in experimental ulcers in the laboratory animal?**

Bienvenida-Del-Carmen Rodriguez-De-Vera 1, Carla Jiménez-Rodríguez 1, María C Jiménez-Díaz 2, Juan F Jiménez-Díaz 2, Francisco J Hernández-Martínez 3

1Universidad de Las Palmas de Gran Canaria, 35015 Las Palmas de Gran Canaria, España; 2Universidad de Jaén, Universidad de Jaén, 23071 Jaén, España; 3Cabildo de Lanzarote, 35500 Lanzarote, Las Palmas, Islas Canarias, España

**Correspondence:** Bienvenida-Del-Carmen Rodriguez-De-Vera (bienvenidarodri@mail.upv.es) BMC Health Services Research 2018, 18(Suppl 2):P39

**Background**

Cannabidiol (CBD) is a phytocannabinoid that does not refer to experiences contrasted with its topical use in ulcerative lesions and skin wounds.

**Objective**

To determine if the topical application of CBD in ulcers exerts a cumulative effect in the organism of the experimental animal, with
undesirable effects at the level of the Central Nervous System (CNS), in a similar way to its general use.

**Methods**

Experimental study applying total skin ulcerative lesions in the adult male white rat, Sprague Dawley strain, with cannabidiol oil to check if it accumulates in the body and can be detected in salivary secretion. Ten animals were used under standard laboratory conditions. After anaesthesia with 100% isoflurane, a total skin wound was performed in the region of the back with a disposable surgical punch of 8 mm in diameter. They were then distributed in individual cages to prevent them from licking each other, with sufficient height to prevent rubbing of the skin ulcer with the passenger compartment. 0.15 ml of cannabidiol oil was applied daily to the ulcers. The study of the body accumulation of the drug object of our study, the cannabidiol oil, was done by qualitative detection of the drug and its metabolites in the saliva of the experimental animal. This type of assay provided a preliminary analytical result using monoclonal Ab to selectively detect high levels of a specific drug which, if positive, would require complementing it with other chemical methods to quantify the accumulation of the product. The test, drogotest®, is made up of spongy collectors (chupa-chups) that, after being soaked for 3 minutes in the mouth of the animal treated with cannabidiol oil, allows to pour its contents by manual compression of the same through a strainer in collecting chamber. Finally, 3 drops of the fluid of the animal’s saliva, contained in said collecting chamber, are poured over a detector sample in cassette wells that will show, or not, the presence of the drug in a time period of less than 10 minutes, by observation, direct visual with colour changes of the cassette sample.

**Results**

The detection by the drogotest® test of the general accumulation of cannabis in the organism of the animals studied was negative.

**Conclusions**

The benefit of the topical use of cannabidiol in ulcerative lesions is confirmed without the undesirable effects that cannabis causes in the CNS.

**References**


**Keywords**

Detection, Saliva, Cannabidiol, Skin, Ulcer, Rat.

**P40**

**Humour and nurses’ stress: humour contributions on stress management. A literature systematic review**

Maria I Santos¹, Rita Marques²

¹Health Sciences Institute, Catholic University of Portugal, 1649-023 Lisbon, Portugal; ²Escola Superior de Saúde da Cruz Vermelha Portuguesa, 1300-125 Lisbon, Portugal

Maria I Santos (inescamiller@gmail.com)

**Background**

Nurses experience high levels of work-related stress due to their daily contact with critical situations, suffering, negative emotions and death. This stress overload imposes negative consequences at an individual and at an organizational level, with direct and indirect costs. On the contrary, humour seems to produce benefits to health, job satisfaction and group cohesion, when used in an adaptive way. There is scientific evidence that humour may establish an incisive coping strategy in the management of work-related stress that can be used by nurses for their own benefit.

**Objective**

The aim of the present study is to build a framework of a systematic review on the relationship between humour and nurses’ work-related stress.

**Methods**

Using the Cochrane Centre recommended methodology, this systematic review was guided by the following research question: What is the contribution of humour to nurses’ stress management? The research was performed through the EBSCO and Google Scholar search engines, in the bibliographic databases: CINAHLP®Complete, MEDLINE Complete, Cochrane Controlled Trials Register, MedicLatina, Pubmed, Scielo and RCAAEP, since 2007 to 2017, using the following conjunctions of descriptors and Boolean operators: humour (OR humor) AND stress AND nurses (OR nursing) NOT children NOT patients NOT students.

**Results**

A sum of four articles, that respond to our research question, was selected. The empirical studies were developed in four different countries (USA, Canada, UK and Portugal) with diverse designs using either qualitative and quantitative approaches. The sample varied from 15 to 61 nurses. All studies demonstrated that humour expressions are used by nurses to deal with stressful situations [1-4].

**Conclusions**

The use of adaptive forms of humour promote detachment and reassessment of the situation contributing to stress management [3, 4]. It also strengthens interpersonal relationships, improves communication and group cohesion, and contributes to job satisfaction [1, 2]. Therefore, evidence shows that humour can be an effective tool in stress management. Moreover, one study points out that humour can also arise in response to stress, warning to an increased stress level [4]. Nevertheless, the reduced empiric evidence found suggests that this subject within Nursing Science is not yet highly established.

**References**


**Keywords**

Humor/humour, Stress, Nurses.

**P41**

**Socio-clinical relationships among nursing students in practice context**

Laura Reis (laurareis@esenf.pt)

Porto Nursing School, 4200-072 Porto, Portugal

BMC Health Services Research 2018, 18(Suppl 2):P41

**Background**

It is in clinical context that the students attribute greater meaning to their peers. This fact is related to a set of new experiences that are significant for these actors. Supported by the literature consulted, we are led to say that they last even beyond the end of the course, unlike the relations established in the classroom.

**Objective**

Analyse the relationships established among students over two consecutive clinical studies.

**Methods**

The study was carried out with students from a group of the 2nd year of a Nursing Degree who were experiencing their first clinical experience in a hospital context, namely 10 weeks in an internal
Stress management in under graduation nursing students

Marco Oliveira, Andrea Santos, Rafaela Barbosa, Diana Portovedo, Isabel Oliveira
Escola Superior de Enfermagem da Cruz Vermelha Portuguesa, 3720-126 Oliveira de Azeméis, Portugal
Correspondence: Isabel Oliveira (ijoliveira@sapo.pt)
BMC Health Services Research 2018, 18(Suppl 2):P42

Background
Admission to higher education is seen by some students as an opportunity of growth, to explore new environments and build new relationships yet, other students, perceive it as potentially anxiogenic. Some of the stressful factors are: examinations, clinical teaching, academic results, a competitive environment and the experience of transition and adaptation to a new academic environment. Therefore, it is necessary to work on the causes of stress and promote coping strategies. Being such an important subject for under graduation students, that experiencing it so intensely, it is crucial that students are also an active part in promoting the efficient management of stress.

Methods
Thus, in order to contribute to the adoption of coping strategies and promote the efficient management of stress, a participatory action research in health was developed in a nursing school. The strategies were: the implementation of a student support line (peer support); monthly meetings, addressed to the student population, on topics related to stress and its management; tutorials for 1st year undergraduate students by 3rd and 4th year students, through a structured program of integration to the nursing school. The follow-up of the effectiveness of the activities was carried out through a questionnaire measuring stress levels. This research foresees an initial evaluation (before implementation), intermediate evaluations and a final one, to measure the achievement of the objectives initially stated.

Results
The preliminary findings show a mean of 8.52 and a standard deviation of 2.73 in the score of the domain Sleep/Stress of the Portuguese version of the Fantastic Lifestyle Assessment.

Conclusions
With the implementation of this participatory action research it is expected a reduction of stress levels, as well as enabling students to adopt coping strategies in order to manage their stress. On the other hand, it will allow a better integration of students, as well as a better academic development, both in theoretical evaluations and in clinical teaching, consolidating the relational skills, which are so important during the course of clinical teaching and later on in their professional life.

Keywords
Nursing students, Stress, Coping skills, Action research, Participatory.

P43
A contribution to the validation of the volume - viscosity swallow test (V-VST) – Portuguese version
Catarina Camões 1, Marília Dourado 1, Maria A Matos 2
1Faculty of Medicine, University of Coimbra, 3004-504 Coimbra, Portugal;
2School of Health, University of Aveiro, 3810-193 Aveiro, Portugal
Correspondence: Marília Dourado (mdourado@fmed.uc.pt)
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Background
The prevalence of swallowing disorders after stroke is well described in the literature [1,2]. The early identification of these alterations resorting to non-invasive and easily administered instruments can minimize its consequences and reduce comorbidity and mortality among these patients [1,4]. The V-VST exhibits good psychometric properties, allowing the early identification of patients at risk of developing respiratory and nutritional complications. Its use also allows dietary preventive recommendations to patients until diagnosis confirmation, by instrumental examinations [2].

Objective
The goal of this study is to contribute to the validation of the V-VST –Portuguese version, in patients with subacute stroke.

Methods
In phase I, the V-VST- Portuguese version [3], as well as its instructions, was presented to a panel of experts constituted by six speech and language therapists, in order to assess its content validity. In phase II, after ethical approval, it was applied to thirty-three patients with subacute stroke, to analyse its psychometric properties, namely its internal consistency and reliability (inter and intra raters). Criterion validity was assessed through the simultaneous application of the 3Oz wst. Collected data were analysed with IBM SPSS version 24.0. Intraclass Correlation, Cronbach’s Alfa and Cohen’s Kappa values were calculated.

Results
Results of phase I demonstrate a very good agreement between all members of the panel of experts as for constituent items of the V-VST (I-CV/Ave = 0.95) as well as to its instructions (I-CV = 0.83). Preliminary results of phase II, showed that the V-VST presents very good intraclass (ICC=0.816) and interclass correlation coefficients (ICC = 0.837). Values obtained from the comparison between the V-VST and 3Oz wst have given similar results (I- CVI = 0.83).

Conclusions
The V-VST - Portuguese version seems to be a valid, reliable and practical tool for assessing dysphagia in patients with subacute stroke. Further studies need to be done in the future.

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neurology C service of the Hospitalar and University Center of Coimbra by all the support and availability showed during this study.

References

Keywords
Deglutition disorders, Bedside examination, Dysphagia, Aspiration.

P44
Strategies to improve hand hygiene practices: an integrative literature review
Ana C. Mestre, Filipa Veludo, Susana Freitas
School of Nursing, Institute of Health Sciences, Universidade Católica Portuguesa, 1649-023 Lisbon, Portugal
Correspondence: Ana C Mestre (catarina-mestre@hotmail.com)
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Background
Healthcare-associated infections (HAIs) are a global concern and pose a real threat to patient safety. Many of them are preventable [1]. Knowing that hands of healthcare professionals are one of the main vehicles in the transmission of microorganisms, hand hygiene (HH) is recognized as the easiest and most effective measure to prevent and reduce HAIs [2]. However, despite all evidence available and although 98% of healthcare professionals consider HH as the most important basic precaution in preventing HAIs, compliance is poor, remaining less than 40% [3,4].

Objective
To identify, in Literature, the most effective strategies to promote HH compliance.

Methods
An integrative review between September and October 2017 was fulfilled with the Boolean strategy: ((TI Title) hand hygiene AND (AB Abstract) nurse AND (AB Abstract) infection AND (AB Abstract) strategy OR compliance OR adherence) in CINAHLS®, Science Direct and Academic Search Complete. A total of 396 articles were identified, initially. After applying the inclusion criteria: primary and secondary studies with a qualitative and quantitative approach available in full text in Portuguese, English, French and Spanish; and exclusion criteria: studies published before 2016, a sample of 12 articles was included for analysis.

Results
From a total of 12 articles analysed, 10 showed the importance of a multimodal approach to the improvement of HH practices with consequent increase in compliance to this behaviour. It stands out the combination of interventions addressing knowledge (education), awareness, context of action (reminders in the workplace) as well as the involvement and support of leaders and managers in building an institutional safety culture (social influence) as the most effective to ensure greater compliance to HH.

Conclusions
In order to improve HH practices and, consequently, adherence to this behaviour, the adoption of a multimodal strategy proved to be more successful when compared to single interventions. At an early stage, it is essential to understand the reasons that lead to non-adherence to HH and after that design interventions based on identified barriers. The approach should be global, including not only healthcare professionals but also leaders and managers.

References

Keywords
Hand hygiene, Healthcare-associated infections, Multimodal strategy, Integrative literature review.

P45
Conception and implementation of a nursing intervention program for family caregivers
Ricardo Melo1,2, Marília Rua3, Célia Santos3
1Centro Hospitalar de Gaia/Espinho, 4400-129 Gaia, Portugal; 2Escola Superior de Saúde, Universidade de Aveiro, 3810-193 Aveiro, Portugal; 3Escola Superior de Enfermagem do Porto, 4200-072 Porto, Portugal
Correspondence: Ricardo Melo (rmcmelo@hotmail.com)
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Background
The increase of longevity of people and prevalence of diseases resulting in situations of dependency [1], emerge a greater need for supportive care to meet the needs expressed [2]. Family caregivers are very important elements in caring for the family member with self-care dependency, at the home context [3, 4]. This is an exhausting process with serious consequences for the general state of health perceived by the caregiver, as well as for the manifested burden [3, 5, 6]. A structured and contextualized intervention program [7] aimed at the qualification and support of family caregivers is essential for the transition and adequate performance of the functions inherent in this role.

Objective
To develop and implement a Nursing Intervention Program with family caregivers of dependent persons, in a home context.

Methods
This process began with an integrative review of the literature, in order to discover the main needs evidenced by family caregivers. Electronic databases were used, namely EBSCO and B-on, with the following descriptors: Caregiver; Family Caregivers; Needs; Dependent. The second stage corresponded to the adaptation of the Intervention Program, with the use of the Delphi technique on a group of experts. The last phase corresponded to a quasi-experimental study, with pre- and post-intervention evaluation, with the implementation of the program on 70 family caregivers, using home visits.

Results
With the review of the literature were obtained 21 articles (ten quantitative studies, five qualitative studies, four systematic reviews of the literature, a review of the literature and a mixed study). The evidenced needs were organized by the Transition Theory: community and social resources; knowledge and preparation; personal meaning, beliefs and attitudes; and socioeconomic condition. The consensus technique allowed the structuring of a Nursing Intervention Program, with 93 interventions, divided in emotional and instrumental support. The implementation of the Intervention Program implied, on average, 6 home visits to the caregivers, emotional support provision and caregiver training.
Conclusions
A Nursing Intervention Program, with structured and contextualized interventions in the home context, with family caregivers of dependent persons, is a facilitator for the transition experienced by caregivers, as well as an important instrument of the work developed by nurses. Thus, it provides the necessary emotional support and skills that enable caregivers to optimize care delivery.

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Keywords
Family caregivers, Intervention program, Transition, Needs, Dependency.

P46
Antimicrobial activity of natural extracts and commercial elixirs in oral pathogens
Maria J Alves (maria.alves@ipb.pt)
5300-253 Bragança, Portugal

Background
Although Streptococcus mutans has been responsible for decades as the etiological agent of dental caries, recent evidence indicates a high prevalence for S. mutans in dental biofilms where Candida albicans resides; which suggests that the interaction between the two species may mediate cariogenic development [1].

Objective
To evaluate the antimicrobial activity of three chemical elixirs of different commercial brands and two aqueous extracts obtained from plants (Chamomilla recutita L. and Foeniculum vulgare Mill.) in C. albicans and S. mutans.

Methods
Percent growth inhibition was quantified by measurement of optical density (OD) at 600 nm in a microplate reader.

Results
Both the extracts and the elixirs presented antimicrobial activity for the two microorganisms previously mentioned. Among the elixirs tested, the one with the highest antimicrobial activity for S. mutans was Colgate (100%), followed by Eludril and a white brand (≥ 99%). For C. albicans, the Eludril (100%) gave the highest activity, followed by Colgate (99%). A Chamomilla recutita extract (10 mg/ml) showed an inhibition percentage of growth of 96% for S. mutans very similar to that of the antibiotic (97%). The inhibition percentage of growth decreased for C. albicans (87%), although it was higher than the anti-fungal fluconazole (84%).

Conclusions
The two extracts showed less antimicrobial activity compared to the elixirs, however, they had higher percentages of inhibition growth than the drugs tested for both microorganisms. The extract of Chamomilla recutita was the one that presented the highest antimicrobial activity for the two microorganisms tested comparatively with Foeniculum vulgare.

References

Keywords
Oral biofilm, Antimicrobial activity, Elixir, Foeniculum vulgare mill, Chamomilla recutita L.

P47
The effects of water walking on body composition – a study with children between 6 and 12 years old
Samuel Honório1,2*, João Oliveira1, Marco Batista1,2, João Serrano1,4, Jorge Santos1, Rui Paula1,2, Pedro Duarte-Mendes1,2
1Department of Sports and Well-being, Polytechnic Institute of Castelo Branco, 6000-084 Castelo Branco, Portugal; 2Research on Education and Community Intervention, 4411-801 Arcozelo, Vila Nova de Gaia, Portugal; 3Centre for the Study of Education, Technologies and Health, Polytechnic Institute of Viseu, 3504-510 Viseu, Portugal
Correspondence: Samuel Honório (samuelhonorio@hotmail.com)
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Background
Aquatic activities have been recommended as frequent practice, due to the physical properties of water, especially because fluctuation and reduction of joint impact, with improvements in the body composition of children.

Objective
The present research aims to verify if there are differences in body composition in children aged between 6 and 12 years who practice swimming, complemented with water walking at the end of each session and those who only practice swimming.

Methods
The sample consisted of 28 individuals aged 6 to 12 years and was divided into two groups: swimming group (SG) with 9 children and a swimming complemented with water walking group (SWWG) of 19 children. In this study, of twelve weeks with three moments of evaluation, with two sessions per week of 45 minutes each, we wanted to identify the benefits in body composition (weight, muscle mass, fat mass, body water, BMI, waist circumference and body percentiles). For that purpose, we used a bio-impedance scale Targa 229777A, and an anthropometric tape to measure the waist circumference. The water walking activity occurred at the end of each session for 6 minutes, performed in straight line with the water level at the children’s chest. In terms of statistical procedures, we used the program Statistical Package for the Social Sciences version number 20 (SPSS 20.0). We used descriptive statistics (minimum, maximum, means and standard deviations), the Shapiro Wilk test for testing the normality of the sample, inferential statistics (non-parametric Mann-Whitney tests, Friedman’s ANOVA), and for the calculation of the magnitude of the effect, the d-Cohen test.

Results
After data treatment, regarding the inter-group analysis (comparison between the swimming group and the swimming group with water walking) we observed that there were significant differences in the weight variable, that is, at the end of the 3 moments. Concerning intra-group differences (improvements in the swimming group and in the swimming with water walking group, in the three moments evaluated), the SWWG showed significant improvements in the variables of weight as well, muscle mass, fat mass, body water, body mass index (BMI) and body percentiles.

Conclusions
We have concluded that the practice of activities such as swimming and water walking has benefits in the analysed variables and that there are differences in the groups analysed; however, the two
activities complemented (swimming and water walking) present much more significant improvements.

**Trial Registration**
NCT03519620

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**Keywords**

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**P48**

**Health literacy level of students at the time of enrolment to health courses in higher education**

Luís S Luís1, Victor Assunção1, Henrique Luís3, Helena Melo3
1School of Health Sciences and Ribeiro Sanches Health School, Instituto Politécnico de Portalegre, 7300-074 Portalegre, Portugal; 2Faculty of Medicine, University of Coimbra, 3000-273 Coimbra, Portugal; 3Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 4School of Health Sciences and Ribeiro Sanches Health School, Instituto Politécnico de Portalegre, 7300-074 Portalegre, Portugal; 5Faculty of Medicine, University of Coimbra, 3000-273 Coimbra, Portugal.

**Correspondence:** Luís S Luís (luiss.luiss@ipleiria.pt)

BMC Health Services Research 2018, 18(Suppl 2):P48

**Background**
A good level of Health literacy is essential for effective communica-
tion between health professionals and patients. Health professionals' training should provide them with a set of skills in this area that would allow them to communicate successfully with other health professionals and patients.

**Objective**
The goal of this study was to identify what level of health literacy students have when enrolled at the Universities and Polytechnic Insti-
tutes. Students from Nursing Degree courses (Portalegre School of Health Sciences and Ribeiro Sanches Health School) and from the Dental Hygiene Degree (Faculty of Dental Medicine of Lisbon and Portalegre School of Health Sciences), had their health literacy level assessed at enrolment, in the year of 2013/2014.

**Methods**
To evaluate the level of health literacy, the Portuguese version of the NVS (New Vital Sign) was administered to 42 dental hygiene students (6 males and 36 females) and 53 nursing students (14 males and 39 females).

**Results**
The total sample, composed of 95 students, was analysed for provenance to higher education level degree. It was verified that 83.5% came from high school, 6.6% entered by the process of Maiores de 23, and 9.9% through other enrolment processes. When analysing these data, by degree, most of the students at the Dental Hygiene degree (92.9%), accessed higher education through high school completion. This value was of 75.5% for Nursing students. Regarding the level of health literacy, it was observed that 72.63% of the students had a high level of health literacy, 24.21% moderate health literacy level and 3.16% low health literacy level. There was a statistically significant difference between Nursing and Dental Hygiene students, with the former having a better health literacy (p = 0.007). At the time of entry to the University and Polytechnic, and when considering courses, collected data shows that, for the Degree in Dental Hygiene, 4.8% of the students had a low level of health literacy, 21.4% present a moderate level and 73.8% a high level of health literacy. When considering the Nursing Degree, these values were, respectively, 1.9%, 26.4% and 71.7%.

**Conclusions**
Students access higher education with a level of health literacy appropriate to the courses they intend to attend. The presented results are preliminary and part of a longitudinal study lasting three academic years, evaluating the evolution of health literacy levels of students throughout their training.

**Keywords:** Health literacy, Nursing School, Dental Hygiene School, Students.
Sedentary behavior of older people above 75: where, when and with whom
Marta Gameiro, Madalena G Silva
Physiotherapy Department, School of Health, Polytechnic Institute of Setúbal, 2910-761 Setúbal, Portugal
Correspondence: Marta Gameiro (marta.gameiro93@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):P50

Background
Sedentary behaviours are understood as activities with a low energy expenditure (<1.5 metabolic equivalent - METs) [1]. Even for those who comply with physical activity recommendations, prolonged time in sedentary behaviours is associated with an increased risk of chronic and cardiovascular diseases; decreased muscle mass, strength and power; decreased functional capacity and premature death in elderly people [2]. Older people spend long periods of time in sedentary behaviour [3]. A deeper understanding of what activities represent these behaviours, when and with whom they take place, becomes extremely relevant for health professionals who need to promote a reduction in sedentary time, among very old people in order to enhance health benefits.

Objective
To characterize the time spent in sedentary behaviour of older people in three urban day-care centres, as to the duration, type of activities, with whom and where they take place.

Methods
A cross sectional study was conducted with 54 participants, average age of 84.53 ± 5.35. An Activity Diary was used to characterize sedentary activity. Each activity noted in the diary was classified in METs, per the Compendium of Physical Activities: Classification of Energy Costs of Human Physical Activities. They were then clustered in four groups: sedentary activities; light intensity; moderate intensity and vigorous intensity activities. Time spent in activities within each group was summed, resulting in the total sum of sedentary, light, moderate, and vigorous intensity activities (min.week⁻¹). Relative and absolute frequencies, as well as mean/standard deviation, were used, to characterize sedentary behaviour.

Results
Our sample was mainly female (88.9%), widowers (70.4%), living alone (64.8%) and with a low educational background (61.1%). On a regular week, they spent an average of 6h20 min (2608.15 ± 930.67 min.week⁻¹) in sedentary behaviour. Half of this time is spent watching TV (50.2%), alone, in the afternoon and evening. Other activities are talking (11.73%), reading (6.7%), resting (6.4%) and playing board games (4.7%).

Conclusions
We conclude that our sample spent an average of 6h20min per day in sedentary activity, mainly in the afternoon and evening, watching television alone. In order to break sedentary patterns, clinical interventions need to tackle this particular period of the day, finding alternative strategies for a greater energy expenditure for very old people.

References

Keywords
Sedentary behavior, Context, Very old people.

Women’s perception on the role of family nurse in the transition to motherhood
Andrea Ferreira, João Simões, Helena Loureiro
Escola Superior Saúde, Universidade de Aveiro, 3810-193 Aveiro, Portugal
Correspondence: Andrea Ferreira (aferreira84@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):P51

Background
The study carried out has as its title “Women’s perception on the role of family nurse in the transition to motherhood” and aims to understand the experiences of puerperal women in relation to the role of the family nurse, in promoting the transition to maternity, in the year 2016/2017, at USF Rainha Tereza.

Methods
The accomplishment of the empirical study was authorized by the ARS Centro Ethics Committee. It is part of a paradigm of qualitative nature, based on a descriptive phenomenological methodology, that intends to answer the research question: What is the perception of puerperal women regarding the interventions of the family nurse in the transition to motherhood? Eleven mothers for the first time, who were selected in a non-probabilistic manner and for convenience, according to previously established inclusion and exclusion criteria, participated in this study. Once the informed consent of all the participants was obtained, the information collection was obtained through the filling of a questionnaire of sociodemographic characterization and the conduction of a semi-structured interview, recorded in an audiographic record, was later transcribed and analysed by the webQDA program, through the Bardin content analysis technique.

Results
Evidence has led to the conclusion that motherhood, as a life cycle transition, is approached by the family nurse in a fragmented way. Women perceive that this health professional has an intervening role in the processes of “Being Woman” and “Being Mother”, but as far as “Being Wife”, the intervention still remains little exiguous. Nevertheless, it became clear that family nurses assume a primordial function in this transition and that this is
essentially related to the role of health promoter attributed to it, by mothers for the first time.

Conclusions
In conclusion, the traineeship report sensitized the importance of relational skills in the delivery of care and the need to provide care in a holistic way, integrating the family as a partner in the perinatal follow-up.

Keywords
Women’s Health, Maternal Health, Motherhood, Transition, Nursing.

PS52
Self-perception of health status and physical condition of elderly people practitioners of hydrogymnastics
Carlos Farinha1, João Serrano2, José P Ferreira1, João Petrica2, Rui Paulo2, Pedro Duarte-Mendes3, Marco Batista2
1Faculty of Sport Sciences and Physical Education, University of Coimbra, 3040-256 Coimbra, Portugal; 2Higher School of Education, Polytechnic Institute of Castelo Branco, 6000-266 Castelo Branco, Portugal; 3Sport, Health and Exercise Research Unit, Polytechnic Institute of Castelo Branco, 6000-266 Castelo Branco, Portugal

Correspondence: Carlos Farinha (cajo596@gmail.com)

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Background
The researcher interest in self-perception of health status and physical condition of the elderly is determinant in an increasingly aging society and where one should seek to improve their quality of life.

Objective
To study the self-perception of health status and the impact of a physical activity program oriented during 4 months among an elderly population of practitioners of hydrogymnastics.

Methods
As instruments were used the questionnaire “most short health survey – 36 items version 2 (SF-36)” translated and validated for the Portuguese version by Ferreira (2000), and the battery of Functional Tests Fitness Test. Questionnaires were filled by the elderly with the presence of the investigator and the physical fitness was evaluated following the protocol of proof. The sample was constituted by 83 elderly individuals over 55 years of age. In statistical terms we used a percentage analysis in the questionnaire and in the evaluation of the physical condition after application of the Kolmogorov-Smirnov test, we used the non-parametric test for two paired variables, Wilcoxon.

Results
According to the different dimensions studied (physical function, physical performance, pain, general health, vitality, social function and emotional performance), we found that the majority of the elderly presents limitations mainly in the most demanding tasks (lift weights, running, walk fast, more intense housework, among others); and that their state of health interfered in the performance of some daily activities, but not in the time spend in performing these same activities. The pains have not been strong in the last times and so, they consider their general health moderate and stable, interfering little in the development of their relationship and social activities. The elderly also said that they feel most of the time calm and tranquil and therefore they feel happy. As for physical fitness, there were improvements in the results in practically all the tests, between the 1st and 2nd evaluation, which showed a positive impact of the work developed during the 4 months.

Conclusions
Based on the results, we can conclude that the elderly of the study evidenced a perception of their health condition considered positive and that fits in the normal parameters for their age. The results of the physical activity program revealed improvements in physical fitness levels, between the beginning and the end of the program, aspect that is determinant for the health and autonomy of the elderly, as the investigation reveals.

Keywords
Gerontomotricity, Physical activity and health, Physical condition, Hydrogymnastics.

PS53
Impact of dual-task on older adults’ gait spatiotemporal parameters
Nádia Augusto1, Rodrigo Martins2, Madalena G Silva1, Ricardo Matias1,3
1Physiotherapy Department, School of Health, Polytechnic Institute of Setúbal, 2910-761 Setúbal, Portugal; 2Red Cross School of Health, 1300-125 Lisbon, Portugal; 3Champalimaud Centre for the Unknown, 1400-038 Lisbon, Portugal

Correspondence: Nádia Augusto (naa.fisio.augusto@gmail.com)

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Background
The ageing process induces changes in gait, particularly in its automatic features [1]. Early detection of gait changes can be a key to ensure timely clinical intervention to prevent falls [2], since most of these occur while walking in dual-task situations [3]. Several studies using 3D kinematic analysis systems have suggested that changes in spatiotemporal parameters can be measured before these changes are noticeable [4,5]. However, their use has been confined to laboratories [6], which is difficult to transfer into clinical practice [7].

Objective
To study the effects of the introduction of a dual task, in spatial/temporal parameters, on the gait of older adults, with an ambulatory 3D kinematic analysis system.

Methods
An exploratory observational study was performed. Fifteen healthy older adults (age= 75.73 ± 6.03 years old) were recruited from a day centre. All participants were instructed to walk 10 meters in a single self-selected pace, and in a dual task (a verbal fluency task and an arithmetic task) condition. Seven spatiotemporal gait parameters were assessed with the Xsens MVN ambulatory system, based on 17 inertial sensors: stride velocity, stride length, stride width, cadence, stance time, swing time and double support time.

Results
The results of the Friedman test revealed statistically significant differences between the temporal parameters of single gait (stride velocity: $\chi^2=11.200, p = 0.004$; cadence: $\chi^2=24.102, p = 0.000$; stance time: $\chi^2=20.133, p = 0.000$; swing time: $\chi^2=17.733, p = 0.000$ and double support time: $\chi^2=19.733, p = 0.000$) and each of the two dual task conditions. No statistically significant differences were observed between the cognitive verbal fluency and the arithmetic conditions.

Conclusions
Our results suggest that spatiotemporal parameters of gait significantly change under both cognitive dual task conditions, and that these changes are detectable with the ambulatory 3D kinematic analysis system used. These findings strongly support the use of body-worn sensors, to early detect changes in gait patterns, promoting timely interventions to prevent falls.

References
To determine worker objective and which variables may influence it.

Recognize the wellbeing perception at work of Portuguese workers.

87.3% works (SD=51.10), 88.1% had a Permanent Employment Contract (PEC), 2 children. Workers worked in the company for about 107.15 months.

The sample mean age was 38.58 years (SD=9.52; min=21; max=62), mean of 67.2 (SD=7.8), Adaptation and Adequacy to Work (AAW) di-
mension of 27.2 (SD=3.2), Organizational Characteristics (OC) of 19.2 (SD=3.9), Interpersonal Relationship (IR) of 11.2 (SD=1.7), Structure of work (SW) of 5.4 (SD=1.3) and Bound with the Institution (BI) of 4.2 (SD=1.6). There were no statistically significant differences (p > 0.05) between PWW and sociodemographic or occupational variables.

However, statistically significant differences (p < 0.05) were found in AAW and lower in BI. Older workers and those who have been working longer at the same function have a lower PWW in IR. Male workers and those with a TEC had a better PWW in the IR, and those who worked ≤ 40 hours per week had higher PWW in SW. These results may be useful for designing interventions to promote wellness at work.

References

Keywords
Workplace, Mental health, Occupational health, Workers wellbeing.

Informal caregivers of oldest old people
Sara Alves1,2, Constança Paúl1,2, Oscar Ribeiro1,3
1Unidade de Investigação e Formação sobre Adultos e Idosos, Centro de Investigação em Tecnologias e Serviços de Saúde, Instituto de Ciências Biomédicas Abel Salazar, 4050-313 Porto, Portugal; 2Centro de Investigação em Tecnologias e Serviços de Saúde, Universidade do Porto, 4200-450 Porto, Portugal; 3Departamento de Educação e Psicologia, Universidade de Aveiro, 3810-193 Aveiro, Portugal

Background
Living longer may lead to a long period of disability and frailty with increasing care demands. Informal caregivers, namely family members, play a very important role in the provision of care to very old individuals. Informal care represents crucial support but the available knowledge on this topic is still scarce in the Portuguese context.

Objective
To provide an overview of caregiving characteristics in a sample of dyads of informal caregivers and oldest old people (80+) from Porto.

Methods
A sample of 72 caregiving dyads was considered. Sociodemographic data, information on the caregiving experience (e.g. length of care, relationship with the person cared) and the disability level of care receiver (Activities of Daily Living – ADL’s and IADL’s, and comorbidities) were obtained.

Results
Informal caregivers had a mean age of 63.9 years (SD=9.95), were mostly women (76.4%), with children (70.8%), married (63.9%) and retired (50.0%). Time spent on caregiving was on average 9.73 hrs/day (SD=7.61) and the length of care was around 7 years (SD=6.15). Most of the sample had formal social support to help in the care provision: 54.2% receives support from home care services and 34.7% from day centres. Care receivers mean age was 92.0 years (SD=5.28), were mostly women (73.6%) and widowed (65.3%). Half of the care receivers (n=36; 50.0%) were completely dependent in ADL’s, 30.6% were moderately dependent, 16.7% severely dependent, and 2.8 % were independent. Most of the sample was severely dependent in IADL’s (95.8%). The mean number of comorbidities was 6.94 (SD=1.95), and the mean of medicines intake was 6.17 (SD=3.41).

Conclusions
This is an ongoing project but current data already shows that the amount of time spent on caring activities by women who are themselves in advanced age is very high, and probably exhausting due to...
the high level of functional dependency of the care recipients. A clear picture of tasks and probable exhaustion of the group of people taking care of very old people is crucial in order to plan which and how to deliver formal care to these dyads. Such planning is important for preventing/ameliorating burden situations and raising the quality of life of care recipients and their families.

Acknowledgements
Project was approved by Ethical Commission of IC BAS UP, approval number 188/2017 and by Portuguese Data Protection Authority (CNPD), approval number 1338/2017.

Keywords
Informal caregiving, Oldest old people, Disability.

P56
Comparison of antioxidant activity for Ginkgo biloba L. and Rosmarinus officinalis L.

Diana Silva1, Ana França2, Cláudia Pinho3, Ana I Oliveira4, Rita F Oliveira5,6, Agostinho Cruz7
1Farmácia Holon, Baguim do Monte, Gondomar, Portugal; 2Farmácia Higiénica, Fão, Esposende, Portugal; 3Centro de Investigação em Saúde e Ambiente, Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal; 5Seção Autónoma de Ciências da Saúde, Universidade de Aveiro, 3810-193 Aveiro, Portugal

Correspondence: Cláudia Pinho (clp@fe.up.pt)

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Background
Natural antioxidant products have gained popularity worldwide and are increasingly being used to treat various diseases [1]. Leaves of Rosmarinus officinalis L. and Ginkgo biloba L. possess a variety of bioactivities, including antioxidant [2].

Objective
Therefore, the present study aims to evaluate in vitro antioxidant properties of aqueous and hydroalcoholic extracts of three different commercial brands of R. officinalis and G. biloba.

Methods
R. officinalis and G. biloba leaves from three different commercial brands were extracted with two solvents (water and 80% ethanol), and antioxidant activity of the extracts were screened using the DPPH assay, and 93.1-329.0 μg/mL (hydroalcoholic extracts) in the Fe²⁺ chelating activity. For the superoxide radical scavenging activity, the hydroalcoholic extracts showed the best IC₅₀ values, ranging from 5.1-15.5 μg/mL, with one brand showing and IC₅₀ value lower (5.1 μg/mL) than positive control (5.8 μg/mL - ascorbic acid). Results also showed that in both plants and brands, the highest antioxidant activity was found mainly in the hydroalcoholic extracts, for all the assays tested.

Results
A comparison of both plant extracts in the DPPH assay and Fe²⁺ chelating activity indicated that R. officinalis showed lower IC₅₀ values compared to G. biloba, ranging from 44.1-61.8 μg/mL (aqueous extracts) and 20.8-23.3 μg/mL (hydroalcoholic extracts) in the DPPH assay, and 93.1-329.0 μg/mL (aqueous extracts) and 33.4-71.0 μg/mL (hydroalcoholic extracts) in the Fe²⁺ chelating activity. For the superoxide radical scavenging activity, the hydroalcoholic extracts of R. officinalis showed the best IC₅₀ values, ranging from 5.1-15.5 μg/mL, with one brand showing and IC₅₀ value lower (5.1 μg/mL) than positive control (5.8 μg/mL - ascorbic acid).

Conclusions
The findings of this study support the view that some medicinal plants are promising sources of potential antioxidants. The different brands and solvent types used in the present study may influence the chemical composition of the rosemary and ginkgo extracts obtained and therefore their antioxidant capacity.

References

Keywords
Antioxidant activity, Ginkgo biloba, Rosmarinus officinalis, Solvent extraction.

P57
The skills of the wound navigator in the health care team

Raquel Silva, Filipa Veludo
School of Nursing, Institute of Health Sciences, Universidade Católica Portuguesa, 1649-023 Lisbon, Portugal

Correspondence: Raquel Silva (raklitasol@hotmail.com)

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Background
Aging co-morbidities are the main reason for skin changes, requiring qualified professionals to assist the person with this problem [1,2]. In this sense, it emerges in the literature even the tenuous concept – wound navigator, which may enhance the approach to the person with wounds, often described as the tissue viability nurse.

Objective
Define the wound navigator and identify his skills.

Methods
Integrative literature review using electronic research (CINAHL®, Nursing & Allied Health Collection, Cochrane Plus Collection, MedicLatina, MEDLINE®) and manual research in 12 specialty associations in tissue viability, with the following descriptors (wound OR tissue viability OR ulcer) AND (nurs*) AND (care OR role OR skills OR patient care team OR navigator OR manager OR multidisciplinary OR interdisciplinary OR tissue viability service OR interven* OR practic*). Inclusion criteria were articles in Portuguese, English, Spanish or French, without temporal limitation, full texts and free access. Exclusion criteria were articles that do not address the study phenomenon. The research was conducted on 08/25/2017, where we obtained 601 articles from the databases and 145 from associations. The titles and abstracts of the publications were read, followed by reading the full text of the selected publications. The sample was defined by 19 articles (15 from databases and 4 from associations).

Results
Only one article defines wound navigator, as the health professional with knowledge in the specialty, who acts as a defender of the interests of the clients, which combines the needs felt by them; the objectives of the treatment and the health care treatment plan by referral [3]. It collects the results achieved from the practice and dissemination of research, in order to highlight their actions before the policy of health care [3]. The competences found in the remaining 18 articles were divided into 4 categories: quality (training, auditing, research and elaboration of norms and protocols) management (involvement in product choice, articulation with suppliers, promotion of change and ability to work in multi and interdisciplinary team), care (postgraduate knowledge, experience in the area of tissue viability, prescription of specialized care and treatments with advanced therapies) and leadership (communication, supervision and consultation).

Conclusions
There is little literature that precisely defines the wound navigator and his skills, therefore more research is needed to describe in detail. When the term is defined and its competences are known, it may through them formally develop teams with nurses specialized in the area, holders of the general and specific attributes identified.

References
Background
Aggressive behaviour emerges in social interaction and is therefore considered as a process arising from the relationship between the person and the person's physical, social and cultural environment over time. In these situations, where the person is experiencing transition processes that generate misaligned human responses, inducing processes of mental suffering as the manifestation of aggressive behaviours, the need to provide specialized nursing care emerges.

Objective
The aim of this study was to analyse the most relevant data from the studies about Nursing Interventions in the prevention and management of aggressive behaviours in the psychiatric context, according to the risk profile of the patients.

Methods
An integrative review of the literature was carried out, in libraries of national and international organizations, using the B-On search engine, PubMed database - from the question “What Nursing interventions in the prevention and management of aggressive behaviours in psychiatric context, according to the risk profile of the patients?” The following keywords were used: Nursing Interventions, Violence, Aggression, and Risk Psychiatry*. 343 articles were considered, published in the period 2004–2016, in Portuguese, Spanish, French or English and with full text. After applying the inclusion and exclusion criteria, we obtained 10 articles that were analysed according to the previously defined protocol.

Results
Five articles addressed the prevention and management measures implemented to deal with the incidents of aggression, while all the others emphasize the implementation of interventions to prevent aggressive behaviour. Award-winning nursing interventions are non-restrictive (communicational and de-escalation techniques). Observation emerges as the first intervention, including risk assessment. Environmental and chemical containment arise among the containment measures.

Conclusions
It was concluded that the risk assessment of aggressive behaviours, upon stratification, followed by the implementation of preventive/management measures, adapted to the risk level, can be easily implemented in the routines of the services. It therefore contributes both to reducing the incidence and severity of these behaviours and to improving the management/reduction of coercive measures.

Keywords
Aggressive behaviors, Psychiatry Context, Prevention, Nursing Interventions.

P58
Nursing interventions in the prevention and management of aggressive behaviors in psychiatric context
Aida Bessa¹, Isabel Marques², Amorim Rosa³
¹Centro Hospital e Universitário de Coimbra, 3000-075 Coimbra, Portugal; ²Escola Superior de Enfermagem de Coimbra, 3046-051 Coimbra, Portugal
Correspondence: Aida Bessa (bessaaida@gmail.com)
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Background
The use of left ventricular assist devices has grown rapidly in recent years for patients with end-stage heart failure (HF) [1]. HF under Mechanical Circulatory Support (MCS) patient-centred care assumes that nurses have professional competence, knowledge and ability to make decisions and prioritize care [2]. The ability of decision-making, and prioritization of multiple nursing interventions depends on clinical judgement and professional and personal experience [3].

Objective
To identify evidence-based nursing interventions that improve the outcomes of patients with HF under MCS and organize them in the form of an Advanced Nursing Practice Model.

Methods
Integrative literature review based on a systematic search of original articles and literature reviews published between January 1st, 2010 and August 31st, 2016, in MEDLINE, CINAHL and Cochrane databases and manual search on Google and ResearchGate. Studies related to adult HF patients with formal indication or under MCS in which the first author was a nurse, have been included. Studies related to patients under MCS devices such as intra-aortic balloon counterpulsation or venovenous extracorporeal membrane oxygenation have been excluded.

Results
From the 41 articles included, 43 categories emerged through content analysis. Those were grouped in four areas of care where nurses should intervene. The 15 nursing interventions included in the Model were not mutually exclusive, which makes that the same intervention can be applied to more than one area of care. There are no validated protocols to each intervention. The model was constructed based on the review results and on The Strong Model of Advanced Nursing Practice [4], Clinical Judgement [5] and Patient Centred Care [2] frameworks.

Conclusions
HF under MCS patients centred-care is complex and requires teamwork and relational skills. It depends on the best available evidence-based scientific knowledge, on stakeholders’ life experience and on context and environment specificity. Patient-related outcomes can be improved through the application of the proposed model. To make it operational, there is a need to standardize practices and to develop protocols, guidelines and training programs to improve advanced nursing practice.

References

Keywords
Heart failure, Mechanical circulatory support, Nursing interventions, Patient-related outcomes, Advanced nursing practice.

P60
Acute effects of aerobic exercise on motor memory consolidation in older people
André Ramalho1, Pedro Duarte-Mendes1, Rui Paulo1, João Serrano1,2, António Rosado1, João Petrica1,2
1Department of Sports and Well-being, Polytechnic Institute of Castelo Branco, 6000-266 Castelo Branco, Portugal; 2Centre for the Study of Education, Technologies and Health, Polytechnic Institute of Viseu, 3504-510 Viseu, Portugal;

Correspondence: André Ramalho (andre.ramalho@ipcb.pt)

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Background
Scientific evidence suggests that an aerobic exercise session promotes improvements in the consolidation of motor memory in adults.

Objective
In this sense, the main purpose of this study was to investigate if an aerobic training session could improve motor memory consolidation in older people.

Methods
The participants of this study were 33 subjects of both genders (M = 68 years old; SD = 4.2 years old) divided in two groups: a control group and an experimental group. The participants performed a Soda Pop test before the aerobic training session (Baseline). The training session lasted 45 minutes and was composed of running exercises. After the training session, the motor memory consolidation was held in three different stages: Training; 1 hour after training; 24 hours after training. The Shapiro-Wilk test was applied to the normality distribution of data and One-way ANOVA test for parametric results.

Results
The results indicated that although the experimental group presented a better performance in motor memory consolidation, 1 hour after training and 24 hours after training, the differences were not significant (p ≥ 0.05).

Conclusions
Thus, it seems that an aerobic training session does not significantly improve motor memory consolidation in older people.

Acknowledgements
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Trial Registration
NCT03506490

Keywords
Aerobic exercise, Motor memory consolidation, Learning, Aging.

P61
Fundamentals of care in the critically ill person in ICU: an integrative literature review
Maria J Pires1, Helga R Henriques2, Maria C Durão3
1Escola Superior de Enfermagem de Lisboa, 1600-190 Lisboa, Portugal; 2Departamento de Fundamentos de Enfermagem, Escola Superior de Enfermagem de Lisboa, 1600-190 Lisboa, Portugal; 3Faculdade de Enfermagem Médico-Cirúrgica, Escola Superior de Enfermagem de Lisboa, 1600-190 Lisboa, Portugal

Correspondence: Maria J Pires (m.joao.pires08@gmail.com)

BMC Health Services Research 2018, 18(Suppl 2):P61

Background
In the critically ill person, the priority of nursing interventions is, in most cases, exclusively directed to the management of the clinical situation, not valuing the fundamentals of care [1,2]. These universal activities are essential to the maintenance of life. They are present in each person, regardless of their health condition, whenever there is the necessary strength, will or knowledge [3,4]. In acute or chronic illness, injury or in the healthy person, the fundamentals of care may be disturbed, which motivate the nurses’ intervention [3,5].

Objective
To know the evidence related to the fundamentals of care in the recovery of the critically ill person.

Methods
Integrative Literature Review, using a PICO model clinical question and carried out through the search of articles in MEDLINE, CINAHL and grey literature databases.

Results
We identified 1,268 results, of which 11 documents were selected to compose the final sample. The analysis of the documents showed that there is an invisibility of the fundamentals of care in ICU, caused by the predominance of biomedical model and technological care. Some studies, however, highlight the importance of nurses’ intervention in patient recovery in areas of fundamentals of care, such as sleep [6], breathing, skin, nutrition, communication, patient and family education, mobilization, positioning and hygiene [7,8].

Conclusions
Fundamentals of care contribute to reducing complications during hospitalization of patients in the ICU, such as malnutrition, development of pressure ulcers or infection. The fundamentals of care are neglected in this context of care to the detriment of the technological care, reason why it is necessary to investigate this issue.

References

Keywords

P62
Adaptation and validation for the Portuguese population of the Quality of the Carer-Patient Relationship (QCPR) scale: preliminary results
Rosa Silva1, Paula Costa2, Isabel Gil3, Hugo Neves3,4, Nele Spruytje, João Apóstolo5
1Faculdade de Ciências da Saúde, Universidade Católica Portuguesa, Institute of Health Sciences, 4200-374 Porto, Portugal; 2The Health Sciences Research Unit: Nursing, Nursing School of Coimbra, 3046-851 Coimbra, Portugal; 3Nursing School of Coimbra, Coimbra, 3046-851, Portugal; 4School of Health Science, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 5Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 6Centre for Evidence Based Practice: A Joanna Briggs Institute Centre of Excellence, 3000-232 Coimbra, Portugal

Correspondence: Rosa Silva (rcpsilva@porto.ucp.pt)

BMC Health Services Research 2018, 18(Suppl 2):P62
Background
The number of elderly with dementia is hastily increasing. The informal (family) carer are urged to perform more activities in order to maintain the elderly health needs. Assessing the quality of the relationship between the dyad (a family carer and a patient with dementia) is necessary to assure that care plans are well adjusted. The Quality of The Carer-Patient Relationship (QCPR), [1] emerges as a specific scale for assessing the quality of the bidirectional relation of the dyad.

Objective
To adapt the QCPR scale to Portuguese and determine its psychometric properties.

Methods
Phase (I), transcultural adaptation according to the international recommendations of the American Association of Orthopedic Surgeons [2], composed by four steps; Phase (II), a pilot study was conducted to assess the preliminary psychometric properties in the new cultural context, with a convenience sample composed by patients with dementia (n=30) and their caregivers (n=30).

The factorial structure of the QCPR in this sample was evaluated through a confirmatory factorial analysis (CFA) with the AMOS software (v.24, SPSS Inc, Chicago, IL).

Results
Phase (I), the initial translations proved to be close to the original content (first step). Less consensual terminology was critically analysed and synthesized by the translators and elements of the research team (second step), resulting in the first version. The versions obtained in the back-translation process (third step) presented good semantic and idiomatic equivalence. After expert consensus (fourth step), the scale was revised in its entirety and punctually reformulated. This resulted in a second translated version, which maintained the original structure (an individualized assessment questionnaire for each element of the dyad, with 14 items of the 5-point Likert-type scale response).

Phase (II), the CFA shows no violation of normality in all variables, with the presence of factorial weights below 0.5 in items 10 and 11 in the caregiver's version, and in items 13 and 14 in the patient's version. Regarding the quality of the adjustment of the model, both the caregiver's version ($\chi^2$/df=1.304; CFI=0.922; GFI=0.731; RMSEA=0.097; P(RMSEA<0.05)=0.05; MECVI=6.739), as well as the patient's version ($\chi^2$/df=1.152; CFI=0.955; GFI=0.760; RMSEA=0.069; P(RMSEA<0.05)=0.05; MECVI=6.475) present a model with questionable to good adjustment.

Conclusions
A strong and positive relation between both latent variables were contrary to what was expected to observe. The fact that only two observations evidenced conflict may indicate that there is a need to strengthen the number and diversity of participants sampled, in order to clarify these preliminary results.

Acknowledgements
This study is part of the project "Cognitive stimulation in the elderly: intervention in cognitive fragility and promotion of self-care", funded by the Nursing School of Coimbra.

References

Keywords
Patient-carer relationship, Quality of the relationship, Dementia.
Promotion of patient safety in nursing practice: what strategies?

Tânia Ferreira 1, Rita Marques 2

1 Universidade Católica Portuguesa, 1649-023 Lisboa, Portugal; 2 Escola Superior de Saúde da Cruz Vermelha Portuguesa, 1300-906 Lisboa, Portugal

Correspondence: Tânia Ferreira (tania.vaf@gmail.com)

Background
Patient safety is a priority for World Health Organization (WHO). The organization considers it fundamental to develop a safety culture among health professionals in general and among nurses in particular, ensuring the safety and quality of the health care.

Objective
To describe the interprofessional collaboration carried out by a group of professionals, in the areas of social work, nursing and pharmacy of the hospital infection control commission (HICC), with the staff and the children and relatives housed in a house of support from a university hospital, in Brazil.

Methods
Experiences reported from July 2016 to December 2017. After identifying the need for a theoretical deepening in prevention and control of infections, especially in the management of children and adolescents with MDR bacteria and their relationships, in the daily routine of the home, a joint planning of actions was started between the infection control team and the support house staff, focusing on health education. Initially, monthly meetings were made among professionals for reflection and problematization of learning and participatory observation, making feasible the situational diagnosis of the house. In these meetings, subjects such as hand hygiene, bacterial transmission, management of individuals with MDR bacteria, matrix-based strategies, hospital and house of support concepts were discussed, enabling a better understanding of the difference of care inside and outside the hospital. After the development and consolidation of concepts, house staff was encouraged to produce health education actions for their public.

Results
The performance of a theatrical play was carried out by both teams in June 2017, where it was identified the consolidation of contents by the professionals in the period of theoretical deepening. After this action, monthly workshops were started with the hosted public, carried out with the participation of both teams, in which issues related to the prevention and control of infections were discussed.

Conclusions
Health education and interprofessional collaboration enabled the development of the identity of the house of support, the strengthening of the team in topics of infection control, as well as the planning and carrying out of activities with the house’s public. Such health promotion actions enabled employees and family members to become multipliers of good practices in infection prevention and control.

Keywords
Health education, Infection control, Interprofessional collaboration.
Keywords
Patient safety, Safety culture, Strategies, Nursing.

References

Keywords
Nursing, Artificial nutrition, Therapeutic obstinacy, Integrative review.

Background
The quality of life (QOL) assessment of children and adolescents has been particularly important in the field of intellectual disability (ID) during the past years. Special Education needs to use a systematic approach to the assessment of the QOL domains, in order to implement a social-ecological model and to promote full inclusion in all contexts of life. It is important to develop a scale that provides simultaneously self-report and report-of-others measures to gather information based on a multiparameter strategy and to encourage person-centred planning.

Objective
This research aims to analyse the validity and reliability of the Portuguese version of the Personal Outcomes Scale for Children and Adolescents (POS-C).

Methods
Data were collected from 54 children and adolescents with ID (Mage = 12.48, SD = 2.93) and respective proxies (Mage = 46.59, SD = 5.68). After the cross-cultural adaptation stage, the validity (content, construct) and the reliability (test-retest, Cronbach’s alpha, inter-rater) properties of the POS-C were examined.

Results
All items of the POS-C were considered relevant by 10 experts, who agreed on a Portuguese version of the scale. The scores of the content validity index (CVI) of each item (≥ .80), the scale CVI-universal agreement (≥ .84), the scale CVI-average (≥ .99) and the Cohen’s kappa (≥ .44) showed suitable content validity of the scale. The total score from self-report and domains ranged from moderate (r = .42 in emotional well-being) to high (r = .82 in social inclusion). Regarding the report-of-others, the Pearson’s coefficients ranged from moderate (r = .49 in emotional well-being) to high (r = .85 in interpersonal relations). The test-retest scores were high in practitioners (r = .95) and in family members (r = .90). The internal consistency reliability of the self-report domains ranged from .41 (interpersonal relations) to .70 (self-determination), and in report-of-others ranged from .54 (physical well-being) to .79 (emotional well-being). The overall scale demonstrated good Cronbach’s alpha scores (α = .81 in self-report and α =
.87 in report-of-others). The inter-rater of domains ranged from .47 (interpersonal relations) to .81 (personal development).

**Conclusions**
This initial research on the psychometric properties of the scale, introduces the POS-C as a useful measure of personal outcome scales for Portuguese children and adolescents with ID. POS-C is an important tool to improve personalized support plans, based on self-report and report-of-others measures.

**Keywords**

**P68**
Development and validation of a multi-domain digital cognitive stimulation program for older adults with mild to moderate cognitive decline
Filipa C Couto1, Maria A Dixe2,3, Jaime Ribeiro3,4, Mónica Braúna2,3, Luís Marcelino5, João Apóstolo6
1The Health Sciences Research Unit: Nursing, Nursing School of Coimbra, Coimbra, 3000-232, Portugal; 2School of Health Science, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 4Research Centre on Didactics and Technology in the Education of Trainers, Department of Education and Psychology, University of Aveiro, Campus Universitário, Aveiro 3810-193, Portugal; 5Informatics Engineering Department, School of Technology and Management, Polytechnic of Leiria, Leiria, 2411-901, Portugal; 6The Health Sciences Research Unit: Nursing, Portugal Centre for Evidence Based Practice: A Joanna Briggs Institute Centre of Excellence, Nursing School of Coimbra, Coimbra, 3000-232, Portugal

**Background**
Frail older adults present a decline on their cognitive function. Cognitive interventions are related to the maintenance of cognitive function and are associated with independence and well-being [1, 2]. A cognitive intervention could be considered as a complex intervention once it contains several interacting components [3]. The MIND&GAIT project expects the development of a structured digital cognitive stimulation program to be used with older adults with mild to moderate cognitive decline.

**Objective**
To develop and validate an elderly-friendly multi-domain digital cognitive stimulation program.

**Methods**
To develop the program, the research team followed Guidelines for complex interventions from The Medical Research Council. The development process comprises four phases [3]. The first phase corresponds to a Preliminary Phase (I), the second to a Modelling Phase (II), the third to a Field Test Phase (III) and the last to a Consensus Conference Phase (IV).

**Results**
The digital stimulation cognitive program has 8 individual sessions and 1 group session. The program has already passed for Phase I, which corresponds to an initial conceptualization of the program design and its support materials. At the moment, it is on Phase II, being presented to an experts’ panel to gather different opinions and evaluations from specialists in the area of cognitive interventions. Each session of the program will later be evaluated at Phase III. All the contributions and analysis resulted from the previous phases will be synthesized in phase IV. It is expected that the critical evaluation, provided by specialists in the area of cognitive interventions, will result in a well-founded and structured intervention to be applied in older adults with mild to moderate cognitive decline. The program’s construction, supported by guidelines and based in elderly-friendly digital components, intends to give a response to the challenge of an increasing aged population alloying e-health. The program is to be used by health professionals and informal caregivers, in order to work as a possible way to prevent or minimize cognitive decline.

**Conclusions**
Cognitive interventions have impact on cognitive decline, a condition that assumes more importance once it is related with frailty in older adults. Although being a multidomain program, it also potentiates people for activities of daily living. As a complex intervention, this program allows health professionals and other people to apply nonpharmacological interventions which can represent the implementation of best practice towards the needs of an ageing population.

**Acknowledgements**
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**References**

**Keywords**
Aged, Cognitive decline, Cognitive stimulation, Frailty, Complex intervention.
allows for the implementation of proximity interventions, such as nursing home care, resulting in an improvement of the health of individuals, families, and communities. The system mentioned above is the one implemented in health centres called S-Clinic and developed by the Serviços Partilhados do Ministério da Saúde (SPMS). However, this process presents some problems, such as the time spent collecting patient data; the introduction of the intervention data into the system, and the lack of a support structure for the data records extracted from the patient by the nurse.

**Objective**
Combining technological evolution, the importance of PHC and the difficulty of the nursing process at home, we propose the development of an application for mobile devices, with the objective of allowing nurses to import patient data through information, data records of the interventions carried out in an electronic format, which are then exported to the system.

**Methods**
In this way, the application will facilitate the work of the nurse because it replaces the records on paper, thus allowing a better collection and structuring of the data, as well as the increase of the efficiency of the work activity, and reduction of the time spent for the collection and introduction of data in S-Clinic. We had to study the essential contents of the nursing process at home and implemented in the system, in order to create a data structure with the closest resemblance to S-Clinic. Then, to obtain this information a meeting was held with nursing experts to provide their knowledge in this area.

**Results**
In this meeting, the contents considered essential for a domicile were addressed, and the key points were: nursing focus or diagnosis and nursing intervention. The data model was implemented in order to cover all the contents. Some security measures that could be implemented have also been discussed, in order to protect data. After the application development was complete, a meeting was held with some of the nursing experts present at the first meeting to gather requirements, in order to evaluate the system.

**Conclusions**
The feedback was very positive, encouraging the research team to continue this development because they see a good solution for the future of the PHC at the home environment.

**Acknowledgements**
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**Keywords**
Nursing. Health information system, Digital health, Innovation, Development.

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**P70**

**Construction of parenthood - role of the family nurse**

Andrea MJ Azevedo, Elsa MOP Melo, Assunção DL Almeida
School of Health Sciences, University of Aveiro, 3810-193 Aveiro, Portugal

**Correspondence:** Andrea MJ Azevedo (jarmacelo.andreia@gmail.com)

BMC Health Services Research 2018, 18(Suppl 2):p70

**Background**
The birth of the first child is presented as the most challenging responsibility facing the family, requiring the adaptation of their interactions with singular and holistic impact. The first six months emerge as a transient, predictable and irreversible milestone. The transition to parenting is marked by the changes and repercussions that drive the child’s growth and development, pre-dating and precipitating others in the family life cycle. Supporting families in transition is the competence of nurses, namely, their intervention in the field of family health nursing, in the training for the construction of parenting.

**Objective**
Understand how parents build their parenting model during the first semester of life of the first child. Analyse parents’ expectations and constraints/difficulties in the transition to paternity. Explore identity figures and resources mobilized by parents in the transition to parenthood.

**Methods**
We developed a phenomenological study of qualitative nature, with a non-probabilistic sampling of convenience that includes 11 subjects, parents with the first child to complete six months of life between October and December 2016, enrolled in USF Rainha D. Tereza. We conducted semi-structured interviews, obtaining the narratives of the experiences and their deepest understanding of them. We complied with ethical procedures and submitted the information collected to analysis using WEBSQDA Software.

**Results**
We highlight the experience of parenting in the desire to be a parent, and in the expectations created in pregnancy, contributing to the parental model. This is determined by factors such as the characteristics of the child, the characteristics and previous experiences of the parents, and the family dynamics. Parents face difficulties in providing care for the child and reconciling parental, marital and familial and social roles. Faced with these difficulties, parents use human, community and monetary resources. We highlight the community resource in support of health care, which is valued by parents. The family nurse, when identified and recognized, is described as an effective and accessible resource in adapting to parenting.

**Conclusions**
The results obtained by the research carried out allowed us to acknowledge the experience of the transition to parenthood of the parents interviewed and to affirm the role of the family nurse, in their capacity to build their own model of parenting, as well as contributing with knowledge to be valued in nursing interventions.

**Keywords**
Nursing, Family, Transition, Parenthood.

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**P71**

**Antioxidant activity of the garlic (Allium sativum L.) submitted to different technological processes**

Carla Sousa1, Catarina Novo2, Ana F Vinha1,3

1Unidade de Investigação em Energia, Ambiente e Saúde, Centro de Estudos em Biomedicina, Fundação Fernando Pessoa, 4249-004 Porto, Portugal; 2Universidade Fernando Pessoa, 4249-004 Porto, Portugal; 3REQUMTE/LAQV, Departamento de Ciências Químicas, Faculdade de Farmácia da Universidade do Porto 4051-401 Porto, Portugal

**Correspondence:** Ana F Vinha (ana-f.vinha@fe.up.pt)

BMC Health Services Research 2018, 18(Suppl 2):p71

**Background**
Garlic has become extensively investigated by its benefits for health. Some therapeutic activities are attributed to the garlic, namely, antioxidant, hepatoprotective, anticancer and antitumor properties, among others [1-3].

**Methods**
Therefore, the total phenolic content (TFC) and the total flavonoid content (TFC) have been determined, as well as the antioxidant
properties of extracts of the different forms of presentation/parts of the garlic existing in the market (bulb, in powder and in tablets/capsules), by the radical 2,2-diphenyl-1-picrylhydrazyl (DPPH) method and by evaluation of the ferric reducing antioxidant power (FRAP). The scavenging capacity of the same extracts against reactive species (O2•−, H2O2, NO•) was also evaluated. Finally, the biological activity of the presentation forms of garlic existing in the market was compared with the one of the garlic peel, considered food waste, taking also into account some variables that can influence the properties of the bulb, that is, boiling and freezing.

Results

TPC was superior in the frozen chopped garlic sample, having the garlic tablets the lowest content. The cooked garlic presented an inferior value of TPC when comparing with the raw chopped bulb. These results indicate that cooking and freezing methods intervene directly with the total phenolic content, but in an opposite way. The extract of cooked garlic had the higher value of TPC, belonging to the lowest tenor to garlic tablets. Radical DPPH• and FRAP methods allowed us to verify that the cooked garlic extract evidenced a superior antioxidant activity. This result can be explained by cell wall rupture derived from heating, provoking antioxidant substance release, new and/or stronger antioxidant substance formation or oxidant enzymes inhibition [4]. The frozen chopped garlic extract presented the highest scavenging capacity of the three studied reactive species. In general, the higher the total phenolic content, the greater the capacity of inhibition of reactive species NO•, O2•− and H2O2.

Conclusions

This study has showed that the diverse forms of presentation/parts of the garlic possess high bioactive compounds content, and consequently antioxidant activity, presenting health benefits.

References


Keywords

Allium sativum L., Bioactive compounds, Antioxidant activity, Reactive species.

P73 Influence of gamma irradiation in the antioxidant potential of pumpkin seeds and mung beans

Anabela Macedo1, Carla Sousa1, Ana F Vinha2,3
1Universidade Fernando Pessoa, 4249-004 Porto, Portugal; 2Unidade de Investigação em Energia, Ambiente e Saúde, Centro de Estudos em Biomedicina, Fundação Fernando Pessoa, 4249-004 Porto, Portugal; 3REQUIMTE/LAQV, Departamento de Ciências Químicas, Faculdade de Farmácia da Universidade do Porto 4051-401 Porto, Portugal

Correspondence: Ana F Vinha (acvinha@ufp.edu.pt)

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Food conservation is a challenge for the food industry. The high respiration rate, the lack of physical protection to avoid water loss and the changes due to microbial attack are often associated with loss of food quality, contributing to deterioration through browning, weight loss and texture changes [1]. Furthermore, bacteria, moulds, enzymatic activity (mainly polyphenol oxidase) and biochemical changes can cause spoilage during storage [2]. The use of ionizing energy for preservation has been widely studied by the food industry. However, studies evaluating the effects of ionizing radiation are mostly available in cultivated species, being scarce the reports on wild species and food waste, considered add-value foods. In this regard, food technology is making progress towards increasing food preservation and contributing to a reduction of the incidence of food-related diseases. Previous studies assessing the potential of gamma irradiation as a suitable technique to increase natural products shelf-life were focused in nutritional and chemical parameters, including bioactive compounds and their antioxidant activity [3]. Many natural compounds found in edible food wastes (seeds) or grains (beans) present antioxidant activity. Among the most important natural antioxidants are phenolic compounds (flavonoids, phenolic acids and tannins), nitrogenous compounds (alkaloids, amino acids, peptides, amines and chlorophyll byproducts), carotenoids, tocopherols and ascorbic acid.

In the present work, the effects of gamma radiation dose (0, 0.5, 1.0, 1.5 and 5.0 kGy) on the chemical composition (total phenolics and total flavonoids) of pumpkin seeds and mung beans were evaluated. The antioxidant activity was studied using DPPH• and FRAP assays. It was observed a slight increase in the content of bioactive compounds, as well as in antioxidant activity, with irradiation doses below 1.5 kGy. Final results showed that irradiation may be a viable technique to guarantee the content of bioactive compounds, as well as their biological properties, including antioxidant activity.

References


Keywords

Food conservation, Gamma irradiation, Pumpkin seeds, Mung beans, Antioxidants.
swimming complemented with water walking group (SWWG) (N=19). The study was performed in 12 weeks with 3 moments of evaluation (M1, M2 and M3), with two sessions per week of 45 minutes each, we wanted to identify the benefits in pulmonary function - Forced Vital Capacity (FVC), Forced Expiratory Volume in 1 second (FEV1) and Peak Expiratory Flow (PEF). The water walking activity occurred at the end of each session for 6 minutes, performed in straight line with the water level at the children's chest. The spirometry tests were realized with the microQuark Spirometer®. For the analysis of the results, we used descriptive statistics, the Shapiro Wilk test for testing the normality of the sample and for inferential statistics the Mann-Whitney tests, Friedman’s Anova, and d-Cohen for the magnitude of effect.

**Results**

The results show, that from the inter-group analysis (comparison between the SG and the SWWG) we observe that there were significant differences in the FVC (M2 - p=0.025), VEF1 (M2 - p=0.01; M3 - p=0.008) and PEF (M1 - p=0.033; M2 - p=0.012; M3 - p=0.037) values. Concerning intra-group differences (improvement in the SG and the SWWG in the three moments evaluated), the SWWG showed significant differences in FVC (p=0.003) and FEV1 (p=0.008), and the SG showed significant differences in VEF1 (p=0.034) and PEF (p=0.013).

**Conclusions**

These results show that "swimming" and "swimming complemented with water walking" show improvements in spirometry values in children. The swimming complemented with water walking group showed better results.

**Acknowledgements**

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**Trial Registration**

NCT03506100

**References**


**Keywords**

Spirometry, Swimming, Water walking.

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**P74**

**Preliminary translation and validation of Movement Imagery Questionnaire – Children (MIQ-C) to Portuguese**

Pedro Duarte-Mendes1,2, Daniel Silva1, João Petrica1, Daniel Marinho4, Bruno Travassos4, João Serrano1, 2Department of Sports and Well-being, Polytechnic Institute of Castelo Branco, 6000-084 Castelo Branco, Portugal; 2Research on Education and Community Intervention 4411-801 Arcolozã – Vila Nova de Gaia, Portugal; 3Centro de Estudos em Educação, Tecnologias e Saúde, Instituto Politécnico de Viseu, 3504-510 Viseu, Portugal; 4Department of Sport Sciences, University of Beira Interior, 6201-001 Covilhã, Portugal; 5Research Center in Sports Sciences, Health Sciences and Human Development, University of Tras-os-Montes and Alto Douro, 5001-801 Vila Real, Portugal

**Correspondence:** Pedro Duarte-Mendes (pedromendes@pcb.pt)

**BMC Health Services Research 2018, 18(Suppl 2):**P74

**Background**

The ability to perform movement imagery has been shown to influence motor performance and learning in sports and rehabilitation. Imagery is a cognitive process that can play an important role in planning and execution of movements or actions. Several instruments have been developed in order to evaluate the ability of imagery in adults such as the MIQ-3, with Portuguese Athletes [1]. However, none focused on imagery ability questionnaire for children with the three modalities (kinesthetic, visual internal and visual external imagery) for Portuguese children.

**Objective**

The objective of this study was to translate and validate preliminary, for the Portuguese children’s population, the Movement Imagery Questionnaire for Children [2], determining its initial psychometric qualities through an exploratory factor analysis model that supports it.

**Methods**

In this study 162 subjects of both genders (124 male, 38 female) with a mean age of 10.1 years (SD = 16) participated. For the development of the Portuguese adaptation of the evaluation instrument, a methodology was developed in two phases: (1) the translation phase and cultural adaptation of the questionnaire and (2) the application of the Exploratory Factor Analysis method of the instrument. In the statistical analysis of data, we used the Kaiser-Meyer-Olkin (KMO) and Bartlett tests, to evaluate the quality of the correlations, and an exploratory factorial analysis (EFA) to determine the number of factors to be retained, the number of items associated with them and their internal consistency. The type of rotation adopted was the oblique rotation Promax.

**Results**

Initially it was found that the procedures of translation and adaptation originated a Portuguese version of MIQ - C similar to the original version. Secondly, we found that the psychometric qualities proved their suitability of adaptation performed (KMO=0.822, Bartlett test p=0.000), demonstrating that its factor structure is the same as the original version (12 items grouped into 3 factors, with 4 items each factor), with quite acceptable levels of validity and reliability (Cronbach’s alpha: 0.85 to MIQ - C, 0.79 for the kinesthetic imagery, 0.74 for the visual internal imagery and 0.76 for the visual external imagery).

**Conclusions**

The results showed that the Portuguese version of the Movement Imagery Questionnaire for Children, with the aim to assess the imagery ability in three modalities (kinesthetic, visual internal and visual external imagery) has quite acceptable indexes for its validation.

**Acknowledgements**

This work was supported by the Portuguese Foundation for Science and Technology (FCT; Grant Pest – OE/CED/UI4016/2016).

**References**


**Keywords**

Imagery, Translation and validation, Children, Exploratory factor analysis.

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**P75**

**New emerging point-of-care platforms for Clostridium difficile testing**

Isabel Andrade1, Chantal Fernandes1,2, Teresa Gonçalves1,3

1Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal; 2Center of Microbiology, Faculty of Medicine, University of Coimbra, 3004-504 Coimbra, Portugal; 3Center for Neuroscience and Cell Biology, University of Coimbra, 3004-504 Coimbra, Portugal

**Correspondence:** Isabel Andrade (imandrade@estescoimbra.pt)

**BMC Health Services Research 2018, 18(Suppl 2):**P75

**Background**

New emerging point-of-care platforms for Clostridium difficile testing
Background
Since 2000, the incidence and severity of Clostridium difficile (C. difficile) infections have increased, justifying the need for expedite, sensitive and specific methods of diagnosis. The existing rapid diagnostic tests vary widely in terms of clinical usefulness, which is evaluated on its sensitivity, specificity, turnaround time (TAT), cost, and availability. Besides that, there is no generally accepted gold standard or single optimal approach for C. difficile testing. This has challenged various stakeholders to develop point-of-care (POC) platforms with the best test performance characteristics, easy to use, and with rapid TAT, a critical element of POC testing to improve the clinical management of this infectious disease. POC testing can be done at home, at the primary care level, by hospital staff in emergency or operating rooms, intensive care units, as well as in extreme environments, such as remote or low-resource settings, or in conditions following emergency crises or natural disasters.

Objective
To review current evidence regarding emerging POC platforms for C. difficile testing.

Methods
PubMed database was searched using keywords relevant to POC testing of C. difficile, since 2000, yielding a total of 10 articles included out of 17 initially identified/selected for full review.

Results
The findings show that during the last decade extensive research efforts were underway to develop stand-alone platforms suitable for POC testing of C. difficile infections. Multistep algorithms using the polymerase chain reaction test for C. difficile toxin gene(s) have the best test performance characteristics, and a trend seems to exist in favour of molecular tests in detriment of immunoassays, in POC platforms. A common feature to all POC devices is the rapid TAT, within seconds-minutes to a few hours, which is crucial for infection management. Some of these POC devices enable to run either prototypes, they may be looked at as a step towards more rapid, miniaturized, portable and easier to use test devices with the potential to affect healthcare decisions at its earliest stage.

Conclusions
In conclusion, research efforts show an increasing number of technologies evolving for the development of POC platforms for C. difficile testing.

Keywords
Clostridium difficile, Point-of-care testing, Turnaround time, Stand-alone platform.

P76
Contributions for the validation of the Portuguese version of the Cohen-Mansfield Agitation Inventory (CMAI)
Rafael Alves1, Daniela Figueiredo2,3, Alda Marques2,4
1Psychiatric Hospital Centre of Lisbon, 1749-002 Lisbon, Portugal; 2School of Health Sciences, University of Aveiro, 3810-193 Aveiro, Portugal; 3Institute of Biomedicine, University of Aveiro, 3810-193 Aveiro, Portugal; 4Center for Health Technology and Services Research, University of Aveiro, 3810-193 Aveiro, Portugal
Correspondence: Rafael Alves (susana.poppocoreia@gmail.com)
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Background
Dementia represents one of the greatest health challenges due to its incidence and frequency, costs and impacts on the individual, family and society. The Diagnostic and Statistical Manual of Mental Disorders – V (DSMV) considers that the behavioural changes, i.e., the non-cognitive aspects of dementia, should be diagnosed, however, this is often not common practice. The identification and quantification of Behavioural and Psychological Symptoms of Dementia (BPSD) can be objectively assessed using the Cohen-Mansfield Agitation Inventory (CMAI). CMAI is a reliable and valid instrument used in clinical and research practice [3], however, it has never been validated for European Portuguese.

Objective
To contribute to the adaptation and validation of the CMAI for the European Portuguese population.

Methods
The study was conducted in two phases. The first phase consisted of the translation and cultural and linguistic validation of the CMAI according to the International Society for PharmacoEconomics and Outcomes Research (ISPOR). The following methodology was used a) Translation, b) Reconciliation, c) Retrospection, d) Harmonization, e) Cognitive testing/analysis and e) Spelling review. In phase 2, the internal consistency was calculated using the Cronbach’s alpha. The intra- and inter-rater reliability was determined using the Intraclass Correlation Coefficient (ICC), using the intra-rater (1,1) and the inter-rater (2,1) equations. A factorial exploratory analysis of the construct validity was conducted with 101 people with dementia (83.3 ± 8.0 years; n=83; 82.2% female). Statistical analysis was performed with the Kaiser-Meyer-Olkin (KMO) test, on the behaviours manifested by more than 10% of the sample and only items weighing more than 0.4 were included in the extracted factors.

Results
The Portuguese version of CMAI revealed good reliability inter-rater (ICC>0.4 for 22/29 items) and excellent intra-rater (ICC>0.75 for 21/29 items) reliability and good internal consistency (α = 0.694). The factorial exploratory analysis was applied to 21 items that meet the criterion. An association in three factors “non-aggressive physical behaviour” (67.3%), “aggressive behaviour” (66.3%) and “verbal agitation behaviour” (63.4%) was found with a reasonable quality (KMO = 0.664) and reasonable internal consistency values (0.754; 0.633; 0.714).

Conclusions
This study contributed to the availability of a measurement instrument for the European Portuguese, that can be used in clinical or research contexts, with people with dementia. As a future study it is suggested to analyse the remaining validation processes (criterion and confirmatory factor analysis).

Keywords
Dementia, Instrument, BPSD, Agitation.

P77
Analysis of the activations of the Intra-Hospital Emergency Team
Maria J Cardo1, Pedro Sousa2
1Centro Hospitalar de Leiria, 2410-197 Leiria, Portugal; 2School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
Correspondence: Maria J Cardo (marisacardo@gmail.com)
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Background
The safety of patients is extremely important, therefore the Intra-Hospital Emergency Team (IHET) has emerged to respond to situations of clinical deterioration of hospitalized patients. When the patient presents deterioration of his clinical condition, it requires being examined in a timely manner by a team that provides the highest level of care. That seems to be the better way to avoid the occurrence of critical events, such as mortality, cardiovascular arrest and unplanned admission in intensive care units.

Objectives
This study aims to determine the characteristics of the IHET activations of Centro Hospitalar de Leiria (CHL).

Methods
This exploratory study analysed the registrations of the activations occurred in the last half of 2011, totalling 325 records. Sociodemographic and clinical characteristics of the patients, and the characteristics of the activations were analysed using the chi-square test and ANOVA.

Results
This study showed IHET activations mainly for male patients (56%), with a mean age of 74.48 ± 13.34 years, with an admission diagnosis related to respiratory diseases (34%) and with the main activation...
Background

More than a quarter of people aged 60-79 years is diabetic [1]. The management of type 2 diabetes (T2D) includes diet, physical activity and, often, medicines; it requires daily self-care and constant lifestyle-related choices [2]. It has been estimated that glycemic control is achieved in less than 50% of T2D patients due to low self-care behaviour [2]. Sustained hyperglycaemia causes complications and premature death, as well as significant costs [1]. Improving self-care and T2D management is therefore crucial.

Technology-based interventions, such as text messages, have successfully been used in T2D management; nevertheless, challenges remain, such as accessibility to users and attrition [3,4]. Relational agents, which are computational artefacts designed to establish rapport and trust by simulating face-to-face counselling in long-term interactions, may overcome such challenges. In particular, they have shown acceptability to older and low literacy patients in other contexts [5,6]. There is a paucity of research on the use of relational agents in older people with T2D.

Objective

To develop a viable prototype of a relational agent software to assist older T2D patients in self-care and to test its use in this patient group.

Methods

This is a mixed-method study, grounded in the Medical Research Council [7] framework to develop and evaluate complex interventions [7]. The first stage - development of the optimal intervention – will comprise the definition of pre-requisites, content production (e.g. dialog creation guided by behaviour-change theories) and empowering existing virtual humans [8] with artificial intelligence. Users and health care professionals will be involved iteratively. The software is expected to run in a tablet, independently from internet connections, targeting adherence to physical activity, diet and medication-use, without assistance from health care professionals. The second stage will be a non-randomised, non-controlled feasibility trial. Eligible subjects enrolled in diabetes nursing consultations in primary care will be invited to participate. Main outcome measures include software use (timing and frequency, usability, patient satisfaction), reported self-care and reported medication adherence. Acceptability will be researched through focus groups. In both stages data will be analysed with the aid of SPSS; qualitative data will be transcribed verbatim and thematically analysed with NVIVO software.

Results

Data collection will start once ethical approval is obtained.

Conclusions

The study is expected to yield a software prototype to facilitate self-care of older T2D patients, with potential to become an effective, scalable and sustainable intervention.

Acknowledgements

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References


Keywords

Diabetes, Self-care, Relational agents, Technology, Elderly

P79

Use of maggot therapy in a hard-to-heal wound care unit: application and home follow-up protocol

Rodrigo C Ferrera1, María AF Fernández1, Pablo G Molinap2, Evelin B Lopez2, Alberto P Paredes3, Adán A Ordial45

1Nursing Department, University of Las Palmas de Gran Canaria, 35015 Canary Islands, Spain; 2Nursing Department, University of Valencia, 46010 Valencia, Spain; 3Hospital Clínico Universitario, 46010 Valencia, Spain; 4Hard-to-heal Nursing Care Unit, Hospital Clínico Universitario, 46010 Valencia, Spain; 5Nursing Department, University of Valencia, 46010 Valencia, Spain

Correspondence: Alberto P Paredes (alpe1591@gmail.com)

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Background

Larval debridement therapy or "maggot" therapy or biosurgery is described as the use of worms for the removal of non-viable tissue. Debridement is achieved thanks to the action of proteolytic enzymes which are secreted by these larvae, liquefying the protein material on the surface of the wound, which is subsequently used by the larvae as a nutritive material. Healthy tissues are not affected, making this method the most selective among those available. In addition, this therapy helps to fight infection and helps normalization and closure of injuries. Larval debridement has been successfully used in a large range of chronic hard-to-heal wounds with presence of non-viable tissue of many
aetiologies such as pressure ulcers, venous or ischemic wounds or diabetic foot ulcers [1-5]

Objective
To ensure continuity in care in the aim of obtaining the best results from the use of larval debridement therapy, while allowing the administration of treatment in any healthcare context, especially at the patient’s own home.

Methods
The procedure for the use of Maggot therapy has been elaborated and coordinated by the Nursing Unit of Ulcers and Complex Wounds of the Hospital Clínico de Valencia. This protocol includes the administrative process, selection of the size of the dressings and the procedure of application and care of the therapy itself. At the same time, an information brochure was prepared for family members, patients and care professionals with information about daily surveillance and application of the therapy.

Results
This protocol is in the process of being implemented, having been applied in several patients with different aetiology of hard-to-heal wounds within home follow-up care with successfully results.

Conclusions
The implementation of a protocol for the use of Maggots debridement therapy seems to be effective in ensuring continuity in the treatment and follow-up of patients with difficult healing wounds in a home care context.

References

Keywords
Maggot therapy, Wound care, Debridement, Home-care settings, Protocolo.

P81
Urinary tract infections and dietary supplements: counselling in pharmacy
Marta Novais1, Cláudia Pinho2, Ana I Oliveira2, Rita F Oliveira2, Agostinho Cruz2
1Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal; 2Centro de Investigação em Saúde e Ambiente, Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal; 3Secção Autónoma de Ciências da Saúde, Universidade de Aveiro, 3810-193 Aveiro, Portugal
Correspondence: Rita F Oliveira (rfo@ess.ipp.pt)
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Background
Urinary tract infections (UTIs) are some of the most common bacterial infections [1]. Treatment usually involves antibiotics, and recurrance is a major concern [2]. Therefore, identifying new and effective strategies, like the use of botanical dietary supplements, to control UTIs is a high priority. It is also important to provide health professionals with adequate knowledge related to the use of these products.

References

Keywords
Dietary supplements, Risks, Adverse reactions reporting, DGAV.

P80
Adverse reactions and dietary supplements
Andreia Barros1, Cláudia Pinho2, Ana I Oliveira2, Rita F Oliveira2, Agostinho Cruz2
1Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal; 2Centro de Investigação em Saúde e Ambiente, Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal; 3Secção Autónoma de Ciências da Saúde, Universidade de Aveiro, 3810-193 Aveiro, Portugal
Correspondence: Rita F Oliveira (rfo@ess.ipp.pt)
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Background
Over the last years, the use of dietary supplements has increased substantially [1]. Although these products are considered as safe and can be beneficial, there are risks associated with some. Manufacturers are not required to demonstrate their safety and efficacy, so it is essential that consumers have good knowledge about dietary supplements [2]. The attribution of injury to a specific supplement can be challenging, especially because of the multiple ingredients, the variability in quality and content, as well as the vast underreporting of adverse reactions [3].

Objective
This study aims to identify the main adverse reactions and knowledge on reporting adverse events associated to the use of dietary supplements, by the population of Porto (Portugal).

Methods
A descriptive, cross-sectional study was performed through an anonymous, confidential and voluntary questionnaire to 404 adult participants from the municipality of Porto (Portugal). Data were analysed quantitatively using SPSS version 24.0.

Results
Of the 404 participants, 54.7% (221) were females and 45.3% (183) were males. Results revealed that 55.9% (226) of the participants were users of dietary supplements and the common reasons for consuming supplements were to improve memory, concentration and reduce fatigue. Of the 226 consumers of supplements, only 1.3% (3) identified adverse reactions after taking supplements with multivitamins and used for insomnia and anxiety. Of the 404 participants, 21.5% (87) referred to know that is possible to report an adverse reaction associated to dietary supplements, in Portugal, since 2014. Also, only 8.9% (36) referred to know which entity is responsible for the adverse reactions associated to supplements, and of these 36 participants only 5.6% (2) had correctly answered the name of the entity - Direção Geral da Alimentação e Veterinária (DGAV).

Conclusions
The findings of this survey indicate the need to provide knowledge on reporting adverse events associated with dietary supplements use. It is essential to provide adequate information to facilitate better understanding of the risks associated with the use of these products.

References
of dietary supplements and other complementary and/or alternative medicines.

Objective
This study aims to evaluate the counseling practices by pharmacy professionals, working in Barcelos (Portugal), related to the use of botanical dietary supplements, in the prevention and/or treatment of urinary infections.

Methods
A descriptive, cross-sectional study was performed through an anonymous, confidential and voluntary questionnaire to a convenience sample of 108 pharmacy professionals from Barcelos (Portugal). Data were analysed using SPSS version 24.0.

Results
Of the 108 participants, 67.6% were females and 32.4% were males. The results showed that 96.3% of the professionals usually advise the use of dietary supplements for the prevention and/or treatment of lower urinary tract infections. The common reasons to recommend supplements include the efficacy and safety of the products, and the lower price. It was also observed that 64.8% of pharmacy professionals consider their knowledge sufficient to recommend dietary supplements for the prevention and/or treatment of urinary infections. Regarding the recommendations by professionals for the prevention of urinary tract infections, the products containing Vaccinium macrocarpon L. were the most recommended. On the other hand, products containing Actinostaphylos uva ursi L. were the most recommended for the treatment of urinary tract infections. In general, the main plants sold by pharmacy professionals for the control of urinary tract infections included Vaccinium macrocarpon L., Actinostaphylos uva ursi L., Vaccinium myrtillus L., Equisetum arvense L. and Hibiscus sabdariffa L.

Conclusions
The findings of this study revealed that pharmacy professionals recommend dietary supplements for control of urinary tract infections and consider their knowledge sufficient to properly advise these products. Because evidence on the efficacy of dietary supplements is often scarce or controversial, providing consistent recommendations about these products to their patients can be challenging for healthcare professionals.

References

Keywords
Urinary Tract Infections, Botanical Dietary supplements, Counseling, Pharmacy Professionals.

P82
Nurse’s intervention – end of life nutrition approach protocol
Tânia S Afonso1, Filipa Veludo1, Patrícia P Sousa1, Dulce Oliveira2
1Instituto de Ciências da Saúde, Escola de Enfermagem, Universidade Católica Portuguesa, Lisboa, Portugal; 2Unidade de Medicina Paliativa, Hospital de Santa Maria, Centro Hospitalar Lisboa Norte, Lisboa, Portugal

Correspondence: Tânia S Afonso (tafonso3@gmail.com)

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Background
To know that nutrition in the present society is increasingly associated with life maintenance and comfort, helps us to understand the complexity of this subject when approached the end of life. Artificial nutrition remains controversial in a palliative context, given the questioning about the quality of life that offers [1]. Protocols help nurses in the decision-making process and increasing their competences.

Objective
To present an end-of-life nutrition approach protocol for palliative care.

Methods
This study is the result of three integrative literature reviews that intended to measure: which nursing interventions promote end of life nutrition in people without artificial nutrition criteria?; what are the evaluation criteria for the end-of-life person for the nurse’s decision-making of start, don’t start or suspending artificial nutrition?; does the nurse’s interventions towards the end-of-life reduce the risk of therapeutic obstinacy associated with artificial nutrition? Based in Buckman & Spikes Communication Protocol [2], the results were integrated in a protocol form and submitted to the opinion of 13 experts, from 18th October to 6th November 2017, and the respective changes were made. Inclusion criteria of experts were: being health professionals; palliative care experience and/or work development in nutrition subjects.

Results
Our experts have on average 37 years old, 10 carry out their activity in Palliative settings, 8 of these have advanced training in Palliative Care. Our protocol considers: I) setting - preparing the environment; II) perception - prior knowledge of the person/family information about nutrition, preferences and considerations regarding the future commitment of feeding and active listening, understanding what the person/family wants to know, especially as to the meaning of nutrition, what that moment represents and invite them to address the subject; III) knowledge - provide adequate information in phases, contextualizing the present symptoms in the disease process (progress) and discuss the evaluation criteria before starting artificial nutrition; IV) emotions – attend to the emotions and provide realistic hope; V) strategy – interventions from the patient’s needs are presented in an algorithm form, promoting oral feeding as long as possible. In all process, the person and family autonomy in decision making is preserved. At each step, we identified an element to avoid in the communication process [1,2].

Conclusions
The set of nurse’s interventions in end-of-life nutrition approach systematizes the elements to be considered in decision-making and guarantees the importance of nurses’ contribution in risk reduction of therapeutic obstinacy.

References

Keywords
Nursing, Nutrition, Spikes protocol, Communication, Palliative care.

P83
Associated factors with polymedication in elderly accompanied in the health strategy of the family of the city of Palhoça, Santa Catarina, Brazil
Fabrícia M Almeida1, Mônica R Moraes1, Giovanna G Vietta1, Roberta TS Shirasaki2, Ísis M Sousa2, Pedro F Simão3, Bárbara O Gama1, Fabiana O Gama1, Paulo F Freitas1, Márcia Kretzer2
1Universidade do Sul de Santa Catarina, 88704-900, Tubarão, Santa Catarina, Brasil; 2Unidade Básica de Saúde Ponte do Ipirang, Palhoça, Santa Catarina, 88130-300, Brasil

Correspondence: Fabrícia M Almeida (fabricia_dani@hotmail.com)

BMC Health Services Research 2018, 18(Suppl 2):P83
Background

Aging implies in an increase in the number of morbidities, which requires medical treatment and may result in the use of multiple medications. Polypharmacy is associated with a risk of loss of quality of life, negative health outcomes and a risk of dependent mortality.

Objective

To evaluate the factors associated to polypharmacy in the elderly followed up in the Family Health Strategy of the city of Palhoça, Santa Catarina, Brazil.

Methods

A cross-sectional study carried out in the elderly accompanied by two Basic Health Units in Palhoça. Data collected between August and November 2017, using a questionnaire with sociodemographic and clinical data and the Geriatric Depression Scale (GDS). Polypharmacy was defined as the use of 5 or more drugs on an ongoing basis. Analysis by SPSS 20.0, with chi-square and Fisher’s exact test, Prevalence Ratio (PR), Confidence Interval (CI) 95%, p < 0.005. The project was approved by the Research Ethics Committee of the Southern University of Santa Catarina.

Results

135 individuals were interviewed, with a mean age of 69.9 years and a standard deviation of 8 years, ranging from 60 to 97 years. The highest frequency was female (70.0%), white (81.3%), married (50.4%), and widowed (28.1%). About the occupation, 80.7% were retired and 54.6% received up to 250 Euros monthly. The schooling was predominantly until elementary school (74.6%), with 9.7% being illiterate, 4.5% with higher education and 0.7% with post-graduation. The majority (63.7%) did not practice physical exercise, 6.8% were smokers. The frequency of depression was 39.6%, with 5.2% categorized as severe depression. The use of drugs among the interviewees ranged from none (44.4%) to 25 different medications per day (0.7%), with 42.3% using 5 or more medications. Among those who reported the use of medication, 63% used antihypertensives, 32.6%, anti-depressants, 37.8%, anti-diabetics and 14.8% analgesics. Self-medication was identified in 23.9%. Polypharmacy had a significant association (p < 0.0001) with the presence of arterial hypertension (RP = 2.85, CI 1.59-5.09), Diabetes Mellitus (RP = 2.31, CI 1.58-3.36), arthritis (RP = 1.60, CI 1.10-2.33), depression (RP = 1.87, CI 1.30-2.69) and cardiovascular diseases (RP = 2.29, CI 1.61-3.26).

Conclusions

Polypharmacy in the elderly presented high prevalence and was associated with the presence of cardiovascular, endocrine, joint and depression diseases. A presence of symptoms of depression was present in 39.6% of the elderly.

Keywords

Polypharmacy, Associated factors, Comorbidity, Elderly.

P84

Lack of Vitamin D in elderly individuals: case study – Figueira da Foz

Ana Azul1, Cristina Santos2, António Gabriel2, João P Figueiredo3, Ana Ferreira1

1Department of Environmental Health, Coimbra Health School, 3046-854 Coimbra, Portugal; 2Department of Laboratory Biomedical Sciences, Coimbra Health School, 3046-854 Coimbra, Portugal; 3Department of Complementary Sciences, Coimbra Health School, 3046-854 Coimbra, Portugal

Correspondence: Ana Azul (ana.sofia.azul@hotmail.com)

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Background

In the institutionalized elderly, there is a high lack of vitamin D, both the institutionalized group (although with higher values of 25(OH)D) and the ambulatory group.

Methods

With the purpose of evaluating the concentrations of 25(OH)D for each one of the studied groups, it was verified that the non-institutionalized group showed higher 25(OH)D values, when compared to the institutionalized group. This result has shown to be statistically significant, with a p-value of 0.003. On the other hand, other variables were compared, as for example, feeding, sun exposure, chronic diseases and intake of vitamin supplements, to try to understand if they had any influence on the 25(OH)D levels. Nevertheless, concerning these parameters, no great differences were verified, because p-values were always higher than 0.005.

Conclusions

With this study, we conclude that the geriatric population presents a high lack of vitamin D, both the institutionalized group (although with higher values of 25(OH)D) and the ambulatory group.

References


Keywords

Aging, Vitamin D, Vitamin supplementation, Public health.

P85

Error prevention in nursing: strategies for a safety culture

Teresa Vinagre1, Rita Marques2

1Instituto de Ciências da Saúde, Universidade Católica Portuguesa, 1649-023 Lisbon, Portugal; 2Escola Superior de Saúde da Cruz Vermelha Portuguesa, 1300-906 Lisbon, Portugal

Correspondence: Rita Marques (ritamdmarques@gmail.com)

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Background

The Safety culture is becoming more and more linked to quality and excellence of care, being a crucial factor for health error prevention. Nursing assumes a crucial role in patient safety, being at forefront of patient care, and should protect patient interests and assure consolidation of strategies that guarantee safety.

Objective

Identify what are the strategies for an effective safety culture and to prevent errors in nursing.

Methods

Literature Review, following the recommended methodology of the Cochrane Centre, guided by the investigation question: What are the
strategies for an effective safety culture and to prevent errors in nursing?
The study includes the analysis of articles found in EBSCO (CINAHL, MEDLINE, Nursing & Allied Health Collection, Cochrane Database of Systematic Reviews), in B-ON and in SCIELO, with the following descriptors: Nursing; Patient Safety; Errors, with the timeframe between 2012 and 2017. The sample resulted in 12 articles.

Results
The Team Work [1-5,8-12] and communication [1-6,8-11] where referenced in 75.0% of the studies as vital measures in an effective safety culture and error preventing in nursing, 66.7% reinforce the importance of error notification [1,2,4,7-11]. 58.3% defend that consistent improvement/training is essential [1,2,4,5,9,11,12], 33.3% consider global safety perception [4,10-12] and the importance of trust in superiors and their compromise with their subordinates [4,10-12] as effective methods, 25.0% stand out the importance of error feedback to health professionals [5,10,11]. As an ending, less than 10% of the analysed studies refer work conditions [4], critical reflexion [6], supervision and existence of standards [3], conflict management [3], and assume the person as the centre of health care [3] as important strategies.

Conclusions
Many are the strategies used for an effective safety culture and error prevention in nursing, being the most significant, team work and communication, followed by error notification and consistent improvement/training. Besides the aspects mentioned above, in every article analysed two crucial factors where identified: the direct relation between the existence of a safety culture and the decrease of advert events in health and the need to make the system safer, instead of trying to change human conditions, as a mean to ensure safety and quality care provision.

References

Keywords
Nursing, Patient Safety, Errors.
Summary

The use of ultrasound in peripheral venous catheterization

Bruno Santos¹, José Pinho², Rogério Figueiredo³, Pedro Parreira⁴, Luciene Braga⁵, Anabel Salgueiro-Oliveira⁶

¹Hospital Privado do Algarve, 8500-322 Alvor, Portugal; ²Escola Superior de Enfermagem de Coimbra, 3046-851 Coimbra, Portugal; ³Universidade Federal de Viçosa, 36570-900 Viçosa, Minas Gerais, Brasil

Correspondence: Anabela Salgueiro-Oliveira (anabelas@esenfc.pt)

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Background

The insertion of peripheral vascular catheters (PVCs) is the most common procedure performed in clinical settings [1]. The traditional method for detection and selection of a venous access includes the use of a tourniquet, palpation, and observation. However, when veins are not visible or palpable, this may lead to successive puncture attempts, causing pain to the patient and discomfort to the nurse, which results in increased costs [2]. In this regard, nurses should consider using vascular visualization technologies that aid in vein identification and selection for difficult intravenous access [3]. However, these technological resources available today, are still underutilized in Portugal.

Objective

This study aims to explore an alternative method (ultrasound) for assistance of the traditional venous cannulation, in order to ensure the satisfaction of the patients and of the health professionals.

Methods

The search method used was the integrative literature review, which analysed relevant research that supports decision-making and the improvement of clinical practice [4]. The investigation question was formulated based on the PICO strategy: How important is the use of ultrasound technology by the nurses in patients with PVCs insertion needs? The search was conducted between 4 and 10 January, 2017, using the timeframe between 01-01-2011 and 31-12-2016, with the purpose of finding only primary scientific studies developed over the past 5 years, in English, Portuguese or Spanish. The search was conducted in the following databases: Medline, Cinahl, Psychology and Behavioural Sciences Collection, MedicLatina, ERIC, Business Source Complete, Library, Information Science & Technology Abstracts e Academic Search. We used two search strategies P1 and P2 with the following descriptors, respectively: Ultrasound AND Peripheral catheterization AND Cannulation; Ultrasound AND Peripheral catheterization AND ultrasound guided NOT Paediatric NOT PICC NOT Artery. We found 146 scientific articles and after reading the title, abstract and full text we retained 8 studies for analysis.

Results

The results found confirm the venous cannulation with assistance of ultrasonography has a higher success rate, when compared to the traditional venous cannulation. It was also possible to observe a decrease in: the numbers of attempts to puncture the vein; the time used in the procedure; the incidence of central venous catheter placement; and as a consequence, the reduction of possible complications. The patient also presented lower levels of pain and higher degrees of satisfaction.

Conclusions

The implementation of ultrasound in clinical settings, such as in nurses training programs, are important to perform ultrasound-guided PVCs placement and quality care.

Keynotes

Nursing, Safety Culture, Error Notification.

References


Keywords

Peripheral venous cannulation, Ultrasound, Nurses.

P88

Nursing care in the person with intestinal elimination ostomy

Igor Pinto¹, Silvia Queiros², Célia Santos³, Alice Brito⁴

¹Universidade Católica Portuguesa, 1649-023 Lisbon, Portugal; ²Escola Superior de Enfermagem do Porto, 4200-072 Porto, Portugal

Correspondence: Igor Pinto (isp.ip@gmail.com)

BMC Health Services Research 2018, 18(Suppl 2):P88

Background

Performing an intestinal elimination stoma triggers changes in the physical, psychological, social, self-care and lifestyle of the person. The way this event is experienced is influenced by several factors. The literature suggests that a systematized nursing care, started in the preoperative period, which includes the postoperative period and continues after hospital discharge, is associated with a better level of adaptation and a higher quality of life of the person with intestinal elimination ostomy.

Objective

To identify the existing literature on nursing care programs and to map the respective interventions performed in the person proposed for the construction of a stoma or with an intestinal elimination stoma.

Methods

A literature review was performed in the Web of Science, CINAHL Plus with Full Text, CINAHL Complete and Scopus databases, based on the Joanna Briggs Institute for Scoping Reviews model, from inception to April 2017. Two independent reviewers performed the analysis of article relevance, extraction and synthesis of the data.

Results

A total of 1,728 articles was identified and only 17 were included for content analysis. It was not possible to find a program that contemplates all phases of perioperative and post-discharge intervention, with the studies focused essentially on one or two specific moments. Considering the interventions mentioned in the literature, the most stated were: stoma site marking; preoperative education; postoperative education; and nursing follow-up after hospital discharge. However, there is still no evidence to suggest timings, methodology and contents to guide the implementation of each of the interventions.

Conclusions

A systematized nursing care in the person with intestinal elimination ostomy, covering the perioperative period and follow-up after discharge, has a significant impact on the adaptation to the stoma, reduces complications, increases the perception of self-efficacy and also the quality of life. It is imperative to create and test an intervention program that contemplates all these phases and all the interventions mentioned in the literature. On the other hand, further studies should be carried out to determine the defining characteristics of these interventions, which help in the decision-making process and the nurses’ performance.

Keywords

Ostomy, Nursing Care, Cecostomy, Colostomy, Ileostomy.
Nurses competencies in catastrophes and disaster nursing
Patrícia MG Godinho, Maria T Leal
Escola Superior de Enfermagem de Lisboa, 1600-190 Lisboa, Portugal
Correspondence: Patrícia MG Godinho (p.guerra@campus.eseil.pt)
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Background
Disasters and catastrophes are unpredictable multi-victim events, leading to a sudden demand for emergency health care. An adequate response requires multidisciplinary professionals that must be experienced and specialized in the field. There is evidence that nurses are important in a catastrophic situation as key-elements that can contribute positively in these situations, because of their broad care-giving skills, that can be applied in a variety of disaster settings, with high levels of creativity, adaptability, and leadership [1]. Nevertheless, nurses need to be competent in disaster nursing, in order to make the difference [2].

Objective
To review the available evidence regarding nursing competencies/interventions that improve victims’ outcomes in the context of catastrophe or multi-victim emergencies.

Methods
We completed an integrative review of the literature available from MEDLINE and CINAHL databases and grey literature, to answer the question: ‘Which nursing competencies/interventions contribute to improve victims’ outcomes in the context of catastrophes or multi-victim emergencies?’ [3].

Results
Eight articles, published between 2012 and 2016, satisfied the search criteria and were analysed. The number of participants varied between 16 and 620 nurses. Most of the articles demonstrate that nurses’ competencies have gaps in this field, due to lack of knowledge, training, and simulation, both in nursing education as in working contexts. One of the studies emphasized that nurses from military hospitals have a superior knowledge and preparation in catastrophes, when compared with nurses from civil hospitals, given their military training [4]. The academic training, and the implementation of catastrophe training in the nursing curriculum is also addressed in three of the analysed articles [4–6]. The fact that hospital administrations and nursing leadership fail as promoters of training and promotion of regular exercises and simulations of disasters, is also evidenced in three articles [5,7,8].

Conclusions
 Globally, the results of this integrative review show that most nurses don’t have enough training in disaster nursing. They are not prepared to respond adequately in a mass-casualty event. The recommendations are that both, in academic fields or at work contexts, regular training and simulations should be part of disaster preparedness.

References

Keywords
Disaster nursing, Nursing competencies, Catastrophe, Multi-victims emergencies, Mass casualty events.

Patient safety culture: the same functional typology, distinct cultures
Vanda Pedrosa (terapeutavandapedrosa@gmail.com)
School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
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Background
Fostering a culture of safety in health organizations should begin by evaluating the current culture. In Primary Health Care, patient safety becomes more important because a considerable proportion of safety incidents, detected in hospitals, originate from earlier levels of the system, from most of the interactions and from the largest volume of appointments of the functional units. At this level of health care, in family health units that provide accessible care, global and longitudinal follow-ups on the health process in a lifetime, enables greater health gains, and greater proximity to the patient. These are elementary health care units, based on multi-professional teams, composed by doctors, nurses and administrative staff. Still, many are on very different levels in terms of safety culture of the patient, although in all, the patient wants to have security.

Objective
Describe the patient’s safety culture of health professionals from two family health units (USF), belonging to the same Health Centre, to understand the similarities and/or differences between them.

Methods
Qualitative study, with a semi-structured interview (to GPs and nurses), at two USFs, models A and B, of one Health Centre in the Lisbon area. Content analysis was supported by maturity levels of a patient safety culture, five maturity levels ranging from 1 (worst culture) to 5 (best culture).

Results
By adjusting the responses within a maturity level for the patient safety culture of the 2 functional units, it was observed that the culture oscillated between 1.8 values in the USF model A, close to a reactive culture, in which the organization only cares about safety when problems occur, and 4 values for USF B, close to a proactive culture, with patient safety measures, even without adverse events, close to the ideal, with an informed and worried team.

Conclusions
The functional units have the same typology, belong to the same Health Centre, but align the patient’s safety culture with its greater and lesser complexity, respectively, model B and A. In other words, patient safety is not observed from the same perspective, although it operates in the same geographical area. There is a need for more and a better evaluation, information and training so that the safety culture develops.
Keywords
Functional units, Primary Health Care, Patient Safety Culture, Education and Training in Patient Safety.

P91
Online opinion leaders and weight loss: a literature review based model
Inga Saboia1, Ana M Almeida2
1Universidade Federal do Ceará, 60020-181 Fortaleza, Ceará, Brasil; 2Universidade de Aveiro, 3810-193 Aveiro, Portugal
Correspondence: Inga Saboia (iguigsabioia@gmail.com)
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Background
Online opinion leaders shape the trends of the current Web 2.0 [1] and eHealth context [2]. In 2013, in the USA, 72% of the netizens sought out others with the same health problem [3]. This illustrates a scenario of a network among users that mutually influence health behaviours and health decisions, creating a new setting of an increasing digital literacy in health [4], in which the patient becomes an agent of their treatment. One of the most researched topics is weight control [3]. The subject of this study is related to public health, specifically obesity, the epidemic of the 21st century [5].

Objective
This study pretends to build a model of analysis, based on a literature review. This model is expected to support a deeper understanding of the role of the opinion leaders on social networks, particularly the ones which sphere of influence acts on weight loss.

Methods
A literature review was conducted through a systematic mapping [6]. The handled databases were: Web of Science, Scopus, PubMed, and Google Scholar. The keywords were: Opinion leader OR Digital Influencer OR Powerful Patient OR Community AND Nutrition OR Obesity OR Weight AND Behaviour change, from 2012 to 2017.

Results
Opinion leadership relates to the degree in which an individual can influence others, according to their characteristics and practices, building interpersonal ties [7]. The opinion leaders types in the current Web 2.0 context are: professionals and non-professionals, being these last ones mainly patient opinion leaders (POLs) [8] or digital influencers [9]. POLs are patients who share content as support for others [8]. Besides these agents, we see the rise of health professionals who connect directly with their audience [9]. These have conquered the media by promoting the “right way to feed” and legitimating themselves through a scientific discourse [10]. Considering the digital influencers context, a dichotomy arises: they can be taken as a threat to public health, or as partners fostering the communication between doctors and patients [9]. Furthermore, social networks have also an important role in this scenario as they connect people with a common purpose (weight loss) [10-15].

Conclusions
This study identified two types of opinion leaders: health professionals, and nonprofessional ones. Both have different behaviours in social networks, but both have an important role in influencing the experience of their followers in weight loss.

Keywords
Online opinion leaders, Online social network, Digital influencers, Patient opinion leader, Digital literacy in health, Nutrition, Public health, Obesity, eHealth, Web 2.0.

P92
Pharmacotherapeutic follow-up in institutionalized elderly
Ana Grou1, Carmen Monteiro2, Jorge Balteiro3
1Escola Superior de Tecnologia da Saúde de Coimbra, Instituto Politécnico de Coimbra, 3046-854 Coimbra, Portugal; 2Farmácia Luciano e Matos, 3000-142 Coimbra, Portugal
Correspondence: Jorge Balteiro (balteiro@estescoimbra.pt)
BMC Health Services Research 2018, 18(Suppl 2):P92

Background
The pharmacotherapy follow-up is one of the best methods to diminish health problems and medicine therapy-associated morbidity. This procedure aims at improve the results obtained at the clinical level and optimize therapeutic plans.

Objective
This work aimed to perform the pharmacotherapy follow-up of elderly residents in long-stay institutions, identify their prevalent pathologies and trends in medicines consumption, as well as to identify and solve negative results of medication (NOM).

Methods
Pharmacotherapy follow-up procedures were applied to 38 elderly Residents in a Long-Stay Institution. The population analysed referred to suffer from a total of 212 pathologies. The majority of these concerned the circulatory system (n=45) and mental and behavioural disturbances (n=38). Daily, 273 medicines are consumed by this population and most of them target the nervous and cardiovascular systems (n= 93 and n=74, respectively).

Results
During the pharmacotherapy follow-up interviews 88 NOM were identified. Upon pharmacist intervention, 52 of the identified NOM were solved or placed under control. During this pharmacotherapy follow-up procedure 131 interventions were performed.

Conclusions
The establishment of pharmacotherapy follow-up is greatly advantageous for patients, particularly for elderly ones. This procedure optimized the results of the therapeutic plan, decreased the impact and solved NOM.

Keywords
Pharmaceutical Follow-up, Elderly Residents in Long-Stay Institutions, Negative Outcomes Associated with Medication Pharmacist Intervention.

P93
The person with ostomy of intestinal elimination: social representation of nurses
Joana Pinho, Tânia Jesus, Liliana Mota
Escola Superior de Enfermagem da Cruz Vermelha Portuguesa, 3720-126 Oliveira de Azeméis, Portugal
Correspondence: Liliana Mota (saxenfermeira@gmail.com)
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Background
During the surgical formation of an intestinal elimination ostomy, the person is challenged to develop a set of self-care skills to guarantee quality of life throughout the health/illness transition process, and the nurse should act as a facilitator in this process [1]. Nurses have an important role to prepare these patients to return back home. This study intends to extract the essence from the nurses’ point of view, about people with ostomy of intestinal elimination.

Objective
To describe the social representation of nurses about the person with intestinal elimination ostomy.

Methods
We conducted a qualitative, descriptive-exploratory study. Data was collected with an online form. The online form had five questions focused in the aim of the study, and each participant answered each question with five words according to their perception. The sample was of convenience, non-probabilistic constituted by 64 nurses which answered to an online form. Data were collected during the month of November (2017) sending emails to all contacts of nurses in the data bases of the nursing school. Anonymity was preserved. Data analysis was computed in IRAMUTEQ. We performed a classic lexico-graphical analysis.

Results
Participants had on average 33.08 (± 8.83) years old (between 22 and 58 years). The majority (76.6%) belonged to the feminine gender and 84.4% of participants were graduated. When the nurses think in ostomy of intestinal elimination, they think in the characteristics of the stoma. The smell has an important role in this category. Focused
in person with intestinal ostomy, nurses are centred in self-care. The nurses consider support (emotional and familiar) and the teachings, the most important necessities of the person with an intestinal ostomy. When they think in the care of these persons they are focused in capacity and knowledge. The preparation to return back home is centred in the acceptance of the disease and on the relationship between nurses and patient.

Conclusions
The social representation of nurses about the person with intestinal elimination ostomy is focused in emancipatory patterns of nursing. The person is the centre of care and the care plan is focused in helping the person to live with quality with this new condition. These results are an important contribute to enhance the practices and to demonstrate the relevance of nursing health/illness transitions of the person with intestinal elimination ostomy.

References

Key words
Ostomy, Intestinal elimination, Social representation, Nursing.

P94
A synthesis of Portuguese studies regarding infertile patients
Joana Romeiro, Silvia Caldeira
Institute of Health Sciences, Universidade Católica Portuguesa, 1649-023 Lisbon, Portugal
Correspondence: Joana Romeiro (joana.m.romeiro@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):P94

Background
Infertility is clinically defined as the inability to conceive and to achieve successful clinical pregnancy after 12 months of regular and unprotected sexual intercourse [1]. In 2010, 48.5 million couples worldwide were reported to have fertility problems [2], affecting both genders in 40% of the cases [3]. Due to this high and broad prevalence, infertility is acknowledged as a public health issue with prioritized intervention [4]. The prevalence in Portuguese population was first known in 2009, when a study estimated that about 260-290 thousand individuals were infertile and approximately 9% to 10% of couples displayed some type of reproductive confinement [5]. These results triggered scientific interest in the study of Portuguese infertile patients and a synthesis of the published Portuguese studies regarding infertility seems important in understanding and caring for these patients.

Objective
To review scientific health empirical research in the study of Portuguese infertile patients.

Methods
Literature review based on search conducted in December 2017. A total of 12 scientific data bases were searched: CINAHL with full text, MEDLINE with full text, MedicLatina, Academic Search Complete, PubMed Web of Science, LILACS, SciELO, RCAAPE, and across ESENFC; Nursing School of Lisbon and Nursing School of Porto databases. No date limit has been applied. Studies considered eligible for inclusion were primary studies in Portuguese samples of male or female individuals and/or in couples having reproductive impairment, available in a full-text format, published on peer-reviewed journals in English, Spanish or Portuguese language.

Results
A total of 2,052 results have been identified and 101 papers were included. Empirical research regarding infertile couples started to be published in 1995. Until current date, 2013 was the year with the highest publication score (13.8%) with psychological aspects of the infertile experience being the most explored (57.4%) in comparison with other health aspects, like for instance related to nursing (2.9%), and psychiatry (0.9%). Primary studies were also published in international journals (53.4%) as original papers (62.3%), and in a thesis format (37.6%).

Conclusions
Although the developments in health research regarding infertile couples, a significant gap in the knowledge is acknowledged, particularly concerning other health disciplines (despite psychology). This seems to be a global tendency in healthcare, and further investigation is needed to fully acknowledge this phenomenon and consequently allow the provision of an effective patient-centred care to these patients.

References

Key words
Infertility, Health, Evidence-based, Review.

P95
Knowledge and consumption of vitamins and food supplements in sportspeople and physical exercise in Coimbra
Adriana Ferreira, Clara Rocha, Jorge Balteiro
Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal
Correspondence: Jorge Balteiro (balteiro@estescoimbra.pt)
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Background
The demand for healthy lifestyles, the concern with health and well-being, and the relentless pursuit of the trend of the “ideal body” has been increasing in recent years, as well as the prevalence of supplement use, as a compensation for an unbalanced diet and search for physical/psychic intensity.

Methods
In order to evaluate the consumption and knowledge about vitamin and dietary supplements in Coimbra, a sample of 333 individuals practicing sports was studied.

Results
The study lasted for nine months. The collection of information was carried out through a questionnaire. The study found that 201 (60.4%) subjects have consumed supplementation, with a prevalence of higher consumption in males (73.3%). Supplement use was higher between 33 and 40 years old individuals. The most consumed type of vitamin supplement was multivitamins with minerals (44.3%) and the food supplement was protein (69%). The most cited reason for the consumption of supplements was “physical and/or intellectual fatigue” (50.5%). The daily frequency of supplementation was high (33.7%), with the highest expenditure on consumption of supplements varying from 10 to 20€, monthly. The place of purchase and the source from which subjects obtained knowledge about supplements was the Internet. As for knowledge on the subject, it was noted that it has been classified as “insufficient” (45.8%) by respondents.
Conclusions
In Portugal, the prevalence of supplementation consumption is still unknown, so it becomes necessary to raise awareness among the population, about potential risks associated with improper supplementation, special diets and unbalanced exercise.

Keywords
Vitamins supplements, Food supplements, Consumption, Knowledge.

P96
Stability of paediatric oral diazepam suspensions
Patrícia Marinho¹, Patrícia Correia²
¹Escola Superior de Saúde do Porto, Instituto Politécnico do Porto, 4200-072 Porto, Portugal; ²Centro de Investigação em Saúde e Ambiente, Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal
Correspondence: Patrícia Marinho (patriciammarinho@gmail.com)
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Background
Currently, hospital pharmacies prepare formulations that aim to adjust the medication to the needs of each patient when the pharmaceutical industry is not able to respond to those needs [1]. One of the formulations produced in the hospital pharmacy is the diazepam suspension 0.4 mg/ml for paediatric use, obtained from diazepam tablets. However, the use of tablets or powders in oral liquid formulations may alter the stability of the active ingredients. Therefore, these formulations should be submitted to stability studies [2]. Nevertheless, the information on the stability of manipulated oral suspensions is scarce [3], so this study is relevant.

Objective
The main goal of this study is to validate a method of diazepam quantification in suspensions. Additionally, we aim to evaluate the stability of diazepam in suspensions during 30 days, after the suspension preparation, establishing an expiration date.

Methods
The quantification method of diazepam in oral suspensions arose from the adaptation of the method described in Portuguese Pharmacopoeia [4], for the same active ingredient in tablets. After the method's validation, the stability of diazepam was evaluated weekly, during 30 days, and the first analysis was done immediately after the preparation of the suspension. During the study period, suspensions were stored under suitable cold conditions (4°C). The stability study of those suspensions showed that diazepam concentration decayed linearly, and that diazepam suspensions lose about 70% of their active principle within 30 days. Moreover, unlike tablets where diazepam concentration decayed linearly as well, diazepam suspensions lose their activity in a 30-day period.

Results
With an accuracy, evaluated by the mean recovery of 80%, and a precision, evaluated by the variation coefficient, varying between 6.1 and 11.5%, the method proved to be practicable. Two suspension's samples were prepared with a similar diazepam concentration (0.43 mg/ml). The stability study of those suspensions showed that diazepam concentration decayed linearly, and that diazepam suspensions lose about 70% of their active principle within 30 days. Moreover, given the limits indicated by the Portuguese Pharmacopoeia [4] for diazepam tablets, it was verified that these suspensions only comply with these limits after 7 days, and that within the established period of validity these limits are no longer met.

Conclusions
Despite all limitations, the adapted method proved to be practicable and the results that followed have pointed to the possible instability of diazepam, when included in this oral suspension formulation. Given the dosage limits set for diazepam tablets [4] and knowing in advance that the validity period usually attributed to the suspension is 15 days, the results point to a new shelf-life of approximately 7 days. However, for a more consistent period of validity to be established, a more detailed stability study is required.

References

Keywords
Diazepam suspensions, Chemical stability, Validation tests, Dosing method, Expiration date.

P97
First-time grandparents and transition to grandparenthood: integrative review of the literature
Sónia Coelho¹, Rogério Rodrigues², Isabel Mendes²
¹Health Sciences Research Unit; Nursing, Nursing School of Coimbra, 3046-851 Coimbra, Portugal; ²Nursing School of Coimbra, 3046-051 Coimbra, Portugal
Correspondence: Rogério Rodrigues (rogerio@esenfc.pt)
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Background
Nowadays families become smaller but at the present time a family involves several generations (even if they do not live together). The family members’ roles change and the role of the grandparents in the transition of first-time parents to grandparenthood needs to be understood.

Objective
To systematize an integrative review of the literature related to the transition to grandparenthood in contemporary Western societies.

Methods
We conducted an integrative review of the literature, in electronic databases (EBSCO®, b-On® and Web of Knowledge®) in order to answer the question: “How is experienced the transition to grandparenting?” The search was limited to articles published between 2006-2016 years, with the descriptors “grandparents” and “transition” in English, French, Portuguese or Spanish.

Results
After analysing the abstracts of 179 articles, excluding repetitions, and those who did not respond to the original question, we obtained 13 articles to include in the integrative review. The level of the methodological approach was level 4. Only descriptive and qualitative studies (non-experimental) were included. The results of the literature review on the topic were grouped into five themes: grand-parenting and gender; become a grandfather/grandmother; parenting and the transition process; role and health; parenting and intergenerational relations.

Conclusions
It was found that the transition to Grandparenthood is studied in risk situations, and more studied in women than in men. Grandparenthood can be seen as a transition or as an adaptive process; as the search for the meaning of life; opportunity for personal growth; a normative event that has emotions and positive and negative cognitions. The process of becoming a grandparent can be considered an event of great social impact. Grandparents see their grandchildren as their extension in time and this gives them a more positive view of aging. The perception that grandparents have of themselves may be important in promoting a positive and healthy aging.

Keywords
Grandparenthood, Grandparents, Transition.

References

Keywords
Diazepam suspensions, Chemical stability, Validation tests, Dosing method, Expiration date.

P98
Intestinal microbiota - impact on host health
Nastasia Fernandes, Alice Nunes, Maria José Alves
Polytechnic Institute of Bragança, 5300-253 Bragança, Portugal
Correspondence: Nastasia Fernandes (nastasia-ar1000@hotmail.com)
BMC Health Services Research 2018, 18(Suppl 2):P98

Background
Nowadays families become smaller but at the present time a family involves several generations (even if they do not live together). The family members’ roles change and the role of the grandparents in the transition of first-time parents to grandparenthood needs to be understood.

Objective
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Conclusions
It was found that the transition to Grandparenthood is studied in risk situations, and more studied in women than in men. Grandparenthood can be seen as a transition or as an adaptive process; as the search for the meaning of life; opportunity for personal growth; a normative event that has emotions and positive and negative cognitions. The process of becoming a grandparent can be considered an event of great social impact. Grandparents see their grandchildren as their extension in time and this gives them a more positive view of aging. The perception that grandparents have of themselves may be important in promoting a positive and healthy aging.

Keywords
Grandparenthood, Grandparents, Transition.
Background

At present it is known that in addition to establish and maintain a normal intestinal health, the intestinal microbiota can exacerbate a multitude of diseases, ranging from colorectal cancer to autoimmune and allergic diseases [1]. The interest in studying the human microbiome, its diversity and human-microorganism interactions has been developing in the last years, as such it has been made available immense information in this area.

Objective

A comprehensive search was performed on the PubMed search, being obtained from this review 112 articles from which 67 were used.

Methods

The intestinal microbiota is considered a “superorganism” and is extremely complex. It is composed of a great diversity of microorganisms, which varies among individuals; however, it is essentially dominated by two phyla, the Bacteroidetes and the Firmicutes. It is dynamic and can be affected by several factors such as diet [2], breastfeeding [3], use of antibiotics [4, 5] and type of delivery [6, 7].

When an imbalance of the microbiota occurs, known as dysbiosis [1, 8], the host is affected, being related to pathologies such as allergies, obesity and Crohn’s disease. Some studies [9, 10-14] have demonstrated that the microbiota participates in the maturation of the immune system and as such is predominant in the response to infectious processes. On the other hand, the intestinal microbiota seems to play a fundamental role in the prevention of allergies [15-26]. Inappropriate colonization after birth and excessive hygiene during childhood, may promote greater allergic reactions. Rats without bacteria have been shown to present more severe allergic reactions [22-26]. Regarding obesity, several authors [27-30] have demonstrated that changes in microbiota are strongly related to the establishment of obesity. It has been demonstrated that the type of microbiota influences obesity; rats with higher amounts of Firmicutes compared to the amount of Bacteroidetes, present greater capacity to promote fat deposition. On the other hand, a switch to a less caloric diet produced a change in the microbiota that led to a decrease in Firmicutes and an increase in Bacteroidetes. These results are surprising and suggest that future obesity control may originate from the type of intestinal microbiota.

Conclusions

Intestinal microbiota is of great relevance because it protects against external factors and the development of certain pathologies. It is therefore important to keep the population informed so that a microbiota considered “normal” can be maintained from childhood to adulthood.

References


Keywords

Intestinal microbiota, microbiota, immune system, dysbiosis, obesity, allergies, Crohn’s disease.
Effects of aging on neuromuscular activity during the performance of a ballistic motor skill

António M Vencesbrito1,2,3,4, Mário A Rodrigues-Ferreira1,2,3
1Escola Superior de Desporto de Rio Maior, Instituto Politécnico de Santarém, 2040-413 Rio Maior, Portugal; 2Unidade de Investigação do Instituto Politécnico de Santarém, 2040-413 Rio Maior, Portugal; 3Centro de Investigação em Qualidade de Vida, 2040-413 Rio Maior, Portugal; 4International Martial Arts and Combat Sports Scientific Society, Rzeszów, Poland

Correspondence: António M Vencesbrito (abrito@esdri.ipsantarem.pt)

Background
Human aging leads to a progressive decline of biological functions that affects the neuro-muscular systems. Sport practice is associated with health maintenance and a better quality of life in older people.

Objective
The aim of this study was to investigate the effects of aging on the neuromuscular reaction time and electromechanical delay during the performance of the karate frontal kick (Mae-Geri).

Methods
Participated in this study 9 elite karate athletes (age, 21.0 ± 2.47 years; height, 175 ± 6.53 cm: weight, 72.0 ± 9.25 kg) and 9 veteran karate practitioners (age, 54.0 ± 3.87 years; height, 176 ± 4.72 cm; weight, 760 ± 9.17 kg). Surface electromyography was recorded from rectus femoris (RF) and vastus lateralis (VL) portions of the quadriceps femoris, long head of the biceps femoris (BF), tibialis anterior (TA) and lateralis gastrocnemius (GA). Kinematic analysis was performed with the Ariel Performance Analysis System (APAS, Ariel Dynamics-2003). The neuromuscular reaction time was defined as the time interval between the auditory stimulus and the onset of electrical activation of a muscle, while the electromechanical delay was the time interval between the onset of the electric activity of a muscle and the beginning of joint movement. Student t-test (two-tailed) was used to analyse the differences between groups, with a significance level of p < 0.05 (SPSS 17.0).

Results
It was observed a tendency to a longer neuromuscular reaction time of the TA in veteran karate practitioners than among elite karate athletes (136.00 ± 58.80 vs 122.00 ± 45.94 ms, p = 0.566), although a significantly shorter neuromuscular reaction time was found in the RF in veteran karate practitioners (137.00 ± 27.93 vs 184 ± 51.55 ms, p = 0.030). Veteran karate practitioners presented a significantly longer RF electromechanical delay than elite karate athletes (127.00 ± 59.11 vs 39.00 ± 47.68 ms, p = 0.003).

Conclusions
The results of the study showed that with the aging process there is an increase in the electromechanical delay, although no negative impact on the neuromuscular reaction time has been observed. Therefore, continuous sport practice in veteran karate practitioners seems to attenuate the effects of aging on neuromuscular systems.

Keywords
Neuromuscular reaction time, Electromechanical delay, Electromyography, Karate.

P100
Nutritional status in institutionalized elderly: is it influenced by polypharmacy and length of stay?

Maria A Marques1,2, Ana Faria3,4, Marisa Cebola1,2,5
1Santa Casa da Misericórdia de Alvaízaré, 3250-115 Alvaízaré, Portugal; 2Faculdade de Medicina, Universidade de Lisboa, 1649-028 Lisboa, Portugal; 3Centro Hospitalar e Universitário de Coimbra, 3000-075 Coimbra, Portugal; 4Escola Superior de Tecnologia da Saúde de Coimbra, Instituto Politécnico de Coimbra, 3046-854 Coimbra, Portugal; 5Escola Superior Tecnologia da Saúde de Lisboa, Instituto Politécnico de Lisboa, 1990-006 Lisboa, Portugal

Correspondence: Maria A Marques (mariaanfmr@gmail.com)
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Background
Aging is frequently associated with conditions, like malnutrition, that may affect the elderly health status and quality of living. Malnutrition has a high prevalence in institutionalized elderly [1]. Polypharmacy is also frequent in older individuals, impairing appetite and possibly contributing to the development of malnutrition [2].

Objective
The aim of this study was to identify nutritional risk in institutionalized elderly and establish a relationship between length of stay in the institution, pharmacotherapy and presence of malnutrition.

Methods
Day of admission, number of medications and sociodemographic data were collected from the patient’s medical file. Malnutrition and nutritional risk were assessed using the Mini Nutritional Assessment (Short Form) (MNA-SF).

Results
Seventy-eight individuals, mainly female (59.0%), with a mean age of 81.7 years (SD = 10.2) were evaluated. Mean length of stay was 6.4 years (SD= 7.8). MNA-SF classified 32 individuals (41.0%) at risk of malnutrition and 20 (25.6%) as malnourished. According to the elderly Body Mass Index (BMI) classification, 28 were at risk of malnutrition and 23 were malnourished (35.9% and 29.7%, respectively), showing a positive correlation with MNA-SF results (p < 0.05). The female gender presented an overall higher risk of malnutrition (p < 0.05). Those who were more dependent to feed themselves were at risk of malnutrition or malnourished (p < 0.05). Fifty-seven of the subjects (73.0%) were underpolymedicated, with a mean number of daily medications of 7.5 (SD= 3.4). A higher number of regular medications is correlated with higher BMI (p < 0.05). No association was found between length of stay or number of drugs taken and malnutrition.

Conclusions
In this population, a high prevalence of risk of malnutrition was identified, particularly in the female gender. Although previously described, a correlation between polypharmacy and malnutrition was not found. A closer look to type of medication might be necessary. In this sample, a very long length of stay was also found. Nutritional intervention in this population should be prompt since admission and regularly provided, preventing the development of malnutrition and comorbidities.

References

Keywords
Malnutrition, Elderly, Polypharmacy.
good hygiene and food safety practices may also lead to food contamination [4,5].

Objective

The sample consisted of canteens of public and private educational establishments and of public and private social solidarity institutions, totalling 26 canteens and 127 professionals. Data collection was performed using a diagnostic sheet of the structural conditions and operation of the facilities.

Results

Measurements of polar compounds in canteens indicated good quality, except for one of the measurements that indicated a less satisfactory quality. In the evaluation of food temperature, it was found that there are some foods that are served in the “danger zone” (≤ 65°C). School cafeterias (without food confectionery) had, in majority, deficient conditions of installation because they were rooms of activities where the meals were served. For this reason, there were no water baths or meal service facilities.

Conclusions

With this work it was concluded that there are deficiencies regarding the structural and operating conditions of canteens/refectories, which could be filled by the construction/enlargement of spaces. Regarding the evaluation of the quality of the oils and temperature of the meals, there were flaws, with possible repercussions on the quality of the meals served. It is also important to develop skills for the elaboration of menus suited to the different age groups and the consumption of healthier diets. Emphasis can be placed on the training of manipulators in order to raise awareness of the repercussions of their role and responsibilities in preventing contamination. Ensuring and promoting food safety is nowadays a requirement of any institution, where food is produced or distributed, as a means of ensuring the promotion of high levels of confidence and safeguarding of the consumer’s health.

References


Keywords

Public Health; Food Safety; Canteens; Promoting Food Safety.

P102

Evaluation of the correlation between height and health of the spine in the student population in the age group of 16 - 19 years old - evaluation with spinal mouse

Alexandra Monteiro, Nelson Azevedo, João Silva, Liliana Rodrigues, Gilvan Pacheco

Instituto de Ambiente de Saúde do Alto Ave, 4720-155 Amarres, Portugal

Correspondence: Nelson Azevedo (nelsonaize@gmail.com)

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Background

The increasing number of postural deviations observed in the student population leads to changes in the spine’s normal curvature, which translates into a greater vulnerability to mechanical stress and traumatic injuries. Although the causes of these postural deviations are diverse and difficult to analyse, the present study decided to investigate whether the height of the students may be one of the factors influencing the appearance of postural alterations detected by the non-invasive evaluation method of the Spinal Mouse®.

Objective

Analyse differences in the incidence of postural changes in a sample of students aged 16-19 years with different heights (cm).

Methods

Eighty-five (85) students aged 16-19 years from Amares High School (Braga) were selected and submitted to a non-invasive postural evaluation by the Spinal Mouse® device, which showed the presence of hypomobility, normal mobility and hypermobility at the sagittal plane in three zones of the vertebral spine (sacral, thoracic and lumbar), as well as an overall tilt in three distinct positions: orthostatic, flexion and extension. Data analysis was performed using the statistical program IBM® SPSS® (Statistical Package for the Social Sciences), version 25. In the statistical tests performed, it was considered as levels of significance, the values of 0.05 (significant) and of 0.01 (extremely significant).

Results

With this work it was concluded that there are deficiencies regarding the structural and operating conditions of canteens/refectories, where food is produced or distributed, as a means of ensuring the promotion of high levels of confidence and safeguarding of the consumer’s health.

P103

The contribution of a Portuguese innovation to prevent complication in venous catheterization

Inês Cardoso¹, Anabela Salgueiro-Oliveira¹, Arménio Cruz¹, José M Martins¹, Liliana Sousa¹, Sara Cortez², Filipa Carneiro¹, Pedro Parreira¹

¹Coimbra Nursing School, 3046-851 Coimbra, Portugal, ²Muroplas - Indústria de Plásticos, 4745-334 Muro, Trofa, Portugal; *Innovation in Polymer Engineering, University of Minho, 4800-058 Guimarães, Portugal

Correspondence: Inês Cardoso (inescardoso@esenfc.pt)

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Background

Venous catheterization is one of the most frequent procedures in nursing clinical practice. Despite the procedure’s importance for healthcare quality, it has some risks and complications such as infiltration, bloodstream infection and phlebitis. Healthcare associated infections are considered a worldwide problem, having a considerable impact on the patients’ and community’s health and economy [1,2]. According to the European Centre for Disease Prevention and Control, prevalence of this type of infections is 6.0% and 10.6%, in Europe and in Portugal, respectively. Bloodstream infections, related with venous catheters, have one of the lowest prevalence, but they may lead to serious consequences [2].

Objective

Explore the procedure of venous catheterization as a risk factor for infection. Explore the role of an innovation as a contribution to the implementation of a prevention measure, in the practice of flushing.

Methods

A literature review involved search in EBSCOhost databases, including articles up to 2017. Some terms used were “infection”, “venous catheter”, “catheterization”, catheter-related infection “complication” “prevention” “management” “practices”, “flushing”.
Articles regarding haemodialysis and urinary catheters were excluded. Guidelines of the societies regarding infusion nursing practices were also included.

Results
Catheterization is considered a risk factor because it creates a possibility for microorganisms to access to the bloodstream. The implementation of an insertion protocol is not enough to eliminate microorganisms and avoid the formation of a biofilm. Integrated in maintenance procedures, flushing contributes to reduce the risk of complications. Studies concluded that the use of an adequate technique of flushing may reduce the biofilm and the probability of infection [3]. Infusion Nurses Society [4] and the Royal College of Nursing [5] include it as a procedure to prevent complications of the infusion therapy. Despite the recommendations, the implementation of this practice is not consistent. To explain lack of adherence, one of the reasons pointed out is the complexity of the task [6]. These results support the development of a Medical Device (MD) (double chamber syringe) that may contribute to the adherence of the flushing practice.

Conclusions
It is important to create strategies to improve adherence to guidelines in clinical context, particularly regarding healthcare associated infections. The development of a MD that may simplify the accomplishment of a good practice, such as, flushing in venous catheter to prevent complication, is proposed in this project.

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References

Keywords
Venous catheter, Infection, Prevention, Flushing.

P104
Patient safety culture: evaluation of multiprofessional teams
Luciane PA Cabral¹, Daniele Brasil², Andressa P Ferreira², Clôris RB Grden¹, Caroline Goñalves¹, Guiltherme Arcaro²
¹Departamento de Enfermagem e Saúde Pública, Universidade Estadual de Ponta Grossa, 4748 Ponta Grossa, Paraná, Brazil; ²Hospital Universitário Regional dos Campos Gerais, 84031-510 Ponta Grossa, Paraná, Brazil
Correspondence: Luciane PA Cabral (luciane.pacabral@gmail.com)

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Background
Patient safety is an essential constituent of the quality of care, and assumes absolute relevance for managers, health professionals, family members and patients, in an attempt to provide a safe care.

Objective
The aim of the study was to evaluate the characteristics of the Patient Safety Culture among professionals of an Intensive Care Unit, through the application of the Hospital Survey on Patient Safety Culture (HSOPSC) instrument.

Methods
The study population consisted of 2% (n= 1) resident physicians; 2% (n= 1) nutritionists; 2% (n= 1) administrative assistants; 5% (n= 3) general service aides; 7% (n= 4) social workers; 8% (n= 5) dentists; 17% (n= 10) nurses; 18% (n= 11) therapists and 40% (n= 24) nursing technicians. Of these 77% (n= 46) were females and 23% (n= 14) males. When questioned about whether their errors were recorded on their functional sheets or used against them in future opportunities, the data became alarming. When questioned about the conduct of their supervisor or boss, it was noted that a considerable number of respondents opted to abstain from comments, marking the option “I do not agree or disagree”. In the issue that addresses the communication in the service, the results were partially satisfactory. Regarding the frequency of reported events, there is a lack of notifications in the sector. When questioned about how patient safety is in the industry 3% (n= 2) considered it excellent, 63% (n= 38) very good and 33% (n= 20) regular. Regarding the general information of the interviewees, which were cited in the introduction of the results, in the open question, only 5% (n= 3) of respondents answered.

Conclusions
The study allowed the evaluation of patient safety characteristics from the perspective of the multi-professional team of an Intensive Care Unit, indicating that there are many aspects to improve in several dimensions on the patient’s culture. However, there are areas with greater fragility, that need a closer look, such as the lack of notifications on the part of the team, issues on the supervisor/chief of the sector and mainly fear of punitive culture.

Keywords
Patient, Safety, Multi-professional.

P105
Innovation in nursing in the creation of medical devices: a Portuguese case study
Pedro Parreira¹, Inês Cardoso¹, Liliana Sousa¹, Arménio Cruz¹, José Martins¹, Sara Cortez², Filipa Carneiro², Luciene Braga² Anabela Sousa-Salqueiro²
¹Coimbra Nursing School, 3046-851 Coimbra, Portugal; ²Muroplás - Indústria de Plásticos, 4745-334 Muro, Trofa, Portugal; ³Innovation in Polymer Engineering, University of Minho, 4800-058 Guimarães, Portugal; ⁴Federal University of Viçosa, 36570-900 Viçosa, Minas Gerais, Brazil
Correspondence: Pedro Parreira (parreira@eesnfcp.pt)

BMC Health Services Research 2018, 18(Suppl 2):P1105

Background
The administration of intravenous medication is a frequent practice in health units (approximately 90% of hospitalized patients experience intravenous medication). Venous catheterization (peripheral or central) allows the administration of medication directly into the bloodstream through an inserted catheter. Although the flushing procedure is desirable between and after the administration of intravenous medication, this procedure is often not observed.

Objective
In order to reduce this problem, a consortium with complementary experience and skills was created between: Muroplás company, Innovation Polymers Engineering Centre (PIEP) and the Coimbra Nursing School (ESEnFC). The consortium developed the “DUO SYRINGE”, a new Medical Device consisting in a sequential-release double-chamber syringe. The benefits of this new device are several: a greater adherence to flushing by health professionals, a higher level of patient safety and a significant reduction of complications.

Methods
After a literature review regarding disease control and prevention, mainly sustained by the Infusion Nurses Society and Royal College of Nursing guidelines, we established important characteristics for this new MD. A focus groups with nurse experts identified and validated the technical characteristics of the device. After developing the preliminary geometry of the syringe through three-dimensional
modelling (3D), a new expert panel of end users evaluated the usability of the MD alpha version sustained in Technology Acceptance Model. In the future, we also intend to carry out laboratory tests for safety validation and to perform clinical studies in a hospital environment.

Results

We identified a set of characteristics that the MD should incorporate, namely syringe size, volume of the two chambers, cannon syringe configuration, and plunger configuration. There was an alignment between literature review and the experts panel opinion.

Conclusions

Clinical practice creates daily new challenges to Nursing and it is crucial to create responses that promote better quality of health care. Identifying problems, creating technological partnerships with companies and technological centres allows to innovate through the development and creation of new MDs. The clinical research with MD allows the evaluation of safety, making clinical practice more effective and safe. This is a new challenge placed to the health professionals. It is desirable to display the intellectual capital available to generate innovations for citizens, reverting in gains to the quality of care.

Acknowledgements

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Keywords

Medical Device, Nursing, Innovation, Syringe.

P106 Nursing home care: nurses' perspective

Tatiana Antunes1, Teresa Capelo1, Anabela Salgueiro-Oliveira1, Luciene Braga2, Pedro Parreira3

1Coimbra Nursing School, 3046-851 Coimbra, Portugal; 2Federal University of Viçosa, 36570-900 Viçosa, Minas Gerais, Brazil

Correspondence: Anabela Salgueiro-Oliveira (anabela@esenfc.pt)

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Background

Nursing home care is a trend of the current society, due to the aging of the population and shorter hospitalization times, for economic reasons and also to prevent infections. In addition, it represents a high potential for improving the quality of care by enabling self-care of patients in their life contexts, involving their families and taking advantage of existing social support networks.

Objective

Analyse the scientific production, in the last seven years, concerning domiciliary nursing care, attending to the nurse’s perspective.

Methods

The search method used was the integrative literature review. The investigation question was formulated based on the PICO strategy: What is the nurse’s perspective about nursing home care? The search was conducted between 22 and 26 May, 2017, in the following databases: ScIELO, Medline with full text, CINHAL with full text, Academic Search Complete, Complementary Index. We only looked for primary scientific studies, published in the last six years, in English, Portuguese or Spanish. The selected descriptors were: Home care nursing OR Domiciliary Care OR Home visits) AND Self-care AND Nurse. We accessed 1,293 scientific articles. After reading title, abstract and full text we retained 9 studies for analysis.

Results

The mobilization of different nursing competencies is important because of patient’s profile and difficulties associated with the contexts where they perform nursing care [1]. Nurses should demonstrate availability, sensitivity, education, creativity and attend to the care needs of the person and family [2]. The care process success depends on the relationship between nurse and patient and/or family [3]. The unpredictability, the lack of in house resources, distance and work overload are some of the difficulties manifested by the nurses [2, 4].

Conclusions

Nurses who provide nursing home care, due to the limited resources they face, will have to carry out a rigorous planning of care, mobilize and inform patients and families about social support networks, as well as to promote self-care.

References


Keywords

Patients, Home nursing care.

P107 Knowledge on pharmacogenomics: gaps and needs of educational resources

Andrea Pinho, Marlene Santos

Escola Superior de Saúde, Instituto Politécnico do Porto, 4200-072 Porto, Portugal

Correspondence: Marlene Santos (mes@estsp.ipp.pt)

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Background

Pharmacogenomics is a science that aims to predict the contribution of genes in an individual’s response to the administration of a drug, in order to increase the therapeutic effect and minimize any Adverse Drug Reaction (ADR). The professionals must have knowledge on the subject, however the studies point to a lack of information of the future health professionals, about concepts and applications of Pharmacogenomics.

Objective

To compare the study plans of Pharmacy, Pharmaceutical Sciences and Medicine courses at a national level and to find out the existence of topics related to Pharmacogenomics, and to verify the knowledge of the students of the Degree in Pharmacy of Escola Superior de Saúde (ESS) of Porto on the topic “Pharmacogenomics”, identifying gaps and needs of educational resources among students of this course.

Methods

A questionnaire-type study was carried out, the first one being applied to the Coordinators of the three courses, at a national level, and another applied to the ESS Pharmacy students about their knowledge about Pharmacogenomics.

Results

The courses have an hourly schedule for Pharmacogenomics between 2.5 hours in Pharmacy and 60 hours in Pharmaceutical Sciences. The students’ knowledge of this subject went from 15.91% in the first year, to 95.92% and 97.3% in the 3rd and 4th years, respectively. Between 76% and 86% of the students were not able to identify drugs or drug metabolizing enzymes whose activity is influenced by genetic variations. Comparing the 3 courses it can be stated that the workload in the curricular plans is reduced, being especially evident in the course of Pharmacy. There is a significant increase in knowledge about Pharmacogenomics as the years of undergraduate studies progress, and the difference between the 3rd and 4th year is not significant, since this subject is taught only on the 2nd year.

Conclusions

The knowledge passed on to undergraduate students and future health professionals is reduced, with an insufficient workload, and does not take place uniformly at a national level. In the case of ESS Pharmacy, there was an increase of knowledge as the degree progresses, despite the few contents taught regarding Pharmacogenomics. In the future, it may be useful to create supplementary courses and trainings for students on this subject.
Specific ergonomic risks at the workplace. This 2-year project (2017-)

Background
Hepatic transplantation is a lifesaving therapy that has been increasing over the years in Portugal. Its success is due largely in part to the use of immunosuppressants, like tacrolimus, the first-line immunosuppressant drug for people undergoing liver transplantation. It is a drug with narrow therapeutic window and great inter-individual variability. This variability is explained in part by polymorphisms of the CYP3A5 gene, which encodes the CYP3A5 metabolizing enzyme. The rs776746 polymorphism affects the CYP3A5 gene and gives rise to a non-functional metabolizing enzyme. The CYP3A5 gene is expressed in both the liver and the gut, that is, the metabolism of tacrolimus is affected by the transplanted liver (donor) genotype, as well as by the gut (receptor) genotype. The identification of polymorphisms becomes important especially in the period immediately after transplantation in order to avoid acute rejection of the organ.

Objective
The objective of this work was to review the influence of rs776746 polymorphism of the CYP3A5 gene on pharmacokinetics of tacrolimus.

Methods
A systematic review was conducted through the Pubmed database search, from 2000 to 2017. Articles that meet the study query and the inclusion and exclusion criteria were included for review.

Results
We selected 23 articles that discuss the influence of the rs776746 polymorphism on the pharmacokinetics of tacrolimus. The evidence suggests that individuals with the CYP3A5*3 (non-expressing) allele have a decreased metabolism of tacrolimus and, consequently, lower blood concentrations of the drug compared to individuals carrying the CYP3A5*1 (expressing) allele. The receptor genotype plays a more important role in the first days after transplantation and the donor genotype becomes more important later when the transplanted organ begins to function properly.

Conclusions
This review concluded that regarding hepatic transplantation it is important to identify both the polymorphisms affecting the metabolism of tacrolimus in the donor and recipient genotypes for a more effective dose adjustment, especially in the critical period immediately after transplantation.

Keywords
Transplant, Liver, Polymorphism, rs776746, Tacrolimus, CYP3A5.

The FITWORK European Project - good practices to develop physical activity programs at work

Background
Workplace physical demands have widely changed in the last century. Nowadays, most of the jobs in the European Union (EU) have a low overall energy demand. In this context, the FITWORK project aims to develop good practices to support ergonomics and health by implementing physical activity programs, addressed to reduce specific ergonomic risks at the workplace. This 2-year project (2017-2018) is co-funded by the Erasmus+ Programme of the European Union and coordinated by Instituto de Biomecánica of Valencia (IBV) Spain. The partners are the University of Coimbra (UC); Rometens Foundation, Romania; Eindhoven University of Technology (TU/e); the European Network for Workplace Health Promotion (ENWHP) and KOMAG, Poland (http://fitwork.eu/).

Objective
Therefore, the general objective of the project is to promote physical activity at work, awareness of workers and health and safety professionals on the significance of health-enhancing physical activity attending to job demands. To meet this objective, FITWORK will identify good practices in occupational risk prevention through physical activities, including motivational aspects, and best practices for implementing workplace health promotion programs (WHPP).

Methods
The workout programs are being implemented in two different organizations, with experimental group and control group, during six months at the Institute of Mining Technology KOMAG, Poland and INNEX S.R.L, with the following aims: I) to identify and evaluate the worksite and the professional risks within each organization; II) to adapt the WHP Programme to every worksite: identify the most appropriate exercises to carry out in each worksite and when the workers have to perform them; III) to monitor and collect data using specific instruments and report periodically about the development of the programme; IV) to give recommendations related to good practice and aspects for improving the implementation of the program.

Results
The primary purposes of the analysis of the results are to validate the effect of the designed physical activity programs and to elaborate good practices guidelines in developing and implementing WHPP Programs.

Conclusions
There is evidence that behaviour changes are ignited by a complex cocktail of perceived benefits other than health alone, but a lack of evidence still exists on the effectiveness of health promotion activities on productivity, absenteeism or well-being. Hence, the desired impact of this European Project is to raise awareness and to engage stakeholders and target groups, sharing solutions and know-how with professional audiences.

Keywords
FITWORK, Job demands, Workplace, Physical activity programs, Erasmus+ Programme.

Adventitious respiratory sounds to monitor lung function in pulmonary rehabilitation

Background
Peak expiratory flow (PEF) has been traditionally used to monitor lung function in patients with chronic obstructive pulmonary disease (COPD) before pulmonary rehabilitation (PR) sessions. However, PEF mainly reflects changes in large airways and it is known that COPD primarily targets small airways. Adventitious respiratory sounds (ARS - crackles and/or wheezes), are related to changes within lung morphology and are significantly more frequent in patients with acute exacerbations of COPD. Thus, ARS may be also useful for the routine monitoring of lung function during PR programs.

Objective
This study explored the convergent validity of ARS and PEF in patients with COPD.

Keywords
Pharmacogenomics, Knowledge, Students, Curricular plan
Methods
Twenty-four (24) stable patients (66 ± 9 years; FEV1 71 ± 19% pred) participating in a PR program were included. Assessments were conducted immediately before one PR session. Presence of ARS (crackles and/or wheezes) at posterior right chest was first assessed by a physiotherapist using a digital stethoscope (dx32a, ThinkLabs, CO, USA). Resting dyspnoea was collected using the modified Borg scale (0-10) and PEF with a peak flow meter (Micro I, Carefusion, UK). Independent t-tests, Pearson and point-biserial correlations were used.

Results
ARS were present in 5 participants (20.8%). Patients with ARS had a lower PEF than patients without ARS (294 ± 62 l/min vs. 419 ± 128 l/min; p = 0.048). PEF was negatively correlated with presence of ARS (r = -0.41; p = 0.048). Resting dyspnoea was negatively correlated with PEF (r = -0.41; p = 0.039), but not with ARS (r = 0.21; p = 0.32).

Conclusions
Findings suggest that both ARS and PEF offer complementary information before a PR session, but that ARS provide additional information on the patient's respiratory status. Further research correlating ARS and PEF with patients' performance and progression during PR is needed to strengthen the usefulness of assessing these parameters in PR.

Keywords
Peak expiratory flow, Adventitious respiratory sounds, Crackles, Wheezes, Pulmonary rehabilitation.

Conclusions
The individual's lifestyle may be more determinant for a healthy aging than access to services when the individual has aged. In order for services to effectively act as a reducer of hospitalizations in the elderly they must be offered before the establishing of the aging process in the individual.

References

Keywords
Aged, Primary Health Care, Health Promotion, Healthy Aging, Life Style.

P111
Health care services and their influence on the autonomy and quality of life of the elderly
Keila CR Pereira, Silvania Silva, Jefferson L Traebert
Universidade do Sul de Santa Catarina, 88137-272, Palhoça, Santa Catarina, Brasil
Correspondence: Keila CR Pereira (keilarausch@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2)P111

Background
Primary Care (PA) performance can be assessed by Ambulatory Care-Sensitive Conditions (ACSC) [1]. They are health problems whose morbidity and mortality can be reduced through resolute and comprehensive care. The performance and access to the health system can delay the hospitalizations of the elderly with all the risks arising from it [2,3].

Objective
Analyse the impact of actions of health care of the elderly on primary care in the ICSAB rate.

Methods
Ecological study of the information on the hospitalizations of people over 60 years of age was obtained by hospital admission authorizations (HAA) from the Hospital Information System (HIS), from all municipalities in the state of Santa Catarina (SC) from 2008 to 2015. For the definition of the Primary Care Sensitive Conditions (PCSC), the official report published by the Ministry of Health was used [4]. The crude PCSC rate was calculated by the ratio between the number of PCSC in the elderly and the reference population for the period multiplied by 10,000. Next, the PCSC rates for each municipality were standardized by age using the direct method, using the world population [5] as the standard. To soften the historical series, as a function of the oscillation of the points, was calculated the moving average centred in three groups. The analysis was performed through the Joinpoint program, version 4.3.1, used to calculate the variation of the rates of hospitalization of elderly people by age-adjusted PCSC, in the period from 2008 to 2015, resulting in the behaviour of the rate in the period studied for each municipality of Santa Catarina.

Results
The analysis showed that for each percentage point of increase in the elderly population rate, one percentage point increases in the annual rate of hospitalization rate for PCSC in the elderly (R² = 0.025). The variables of the performance of attention to the elderly did not show association in the hospitalizations.

Conclusions
The morphological and functional cardiac changes in TAVI follow-up – evaluation through transthoracic echocardiography
Virginia Fonseca, Ana Costa, Inês Antunes, João Lobato
Escola Superior de Tecnologia da Saúde de Lisboa, 1990-094 Lisboa, Portugal
Correspondence: Virginia Fonseca (virginiafonseca@estesl.ipl.pt)
BMC Health Services Research 2018, 18(Suppl 2)P112

Background
Aortic Stenosis is a valvular disease with increasing prevalence. Transcatheter aortic valve implantation (TAVI) is a treatment option for patients who cannot undergo surgical valve replacement [1,2,3,4].

Objective
The aim of this study was to describe and compare morphological and functional cardiac changes, through transthoracic echocardiography, in the follow-up after TAVI.

Methods
Patients, with ages between 63 and 85 years old, submitted to TAVI were evaluated by transthoracic echocardiography between 24th to 72h and 1 to 4 months after the procedure. The study variables selected were perivalvular regurgitation, maximum velocity and gradient, left ventricular (LV) function and dimensions, and left atrium (LA) diameter. Statistical analysis of the study variables was made using descriptive statistics, Shapiro-Wilk test, Wilcoxon’s test and McNemar test. The results were considered statistically significant when p value < 0.05.

Results
It was registered a significant increase in maximum velocity and gradient (p=0.004 and p=0.010, respectively) from the first to the second echocardiogram. There weren’t significant differences in LV ejection fraction, LV telediastolic and telesistolic volumes and in LA diameter. LV index mass decreased comparing to the first echocardiogram (from 157.92 to 142.28 g/m2), however, this difference wasn’t statistically relevant. The prevalence of regurgitation (80%) was unchanged between evaluations.

Conclusions
Transcatheter valve aortic implantation is a relatively new procedure for aortic stenosis treatment, with morphological and functional changes in the heart [3]. The studied variables didn’t demonstrate any significant changes, with the exception of maximum velocity and gradient. LV mass decreased in average 15.71
g/m², and from a clinical perspective, can have an impact in the patient’s prognostic.

References

Keywords
TAVI, Transcatheter aortic valve implantation, Aortic stenosis, Trans-thoracic echocardiography.

P113
Literacy of family caregivers of people with Alzheimer’s disease
Rui Moreira 1, Lia Sousa 1, Carlos Sequeira 1
1Centro Hospitalar de São João, Pólo Valongo, 4440-563 Valongo, Portugal; 2Centro Hospitalar de São João, 4200-319 Porto, Portugal; 3Escola Superior de Enfermagem do Porto, 4200-072 Porto, Portugal
Correspondence: Rui Moreira (ruijorgelm@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):P113

Background
Increasing population ageing is bringing with it a higher incidence and prevalence of Alzheimer’s disease. In addition to incapacitating the sick person this disease has destabilising effects on the family, particularly because they are the caregivers. Therefore, it is important to know how informed family caregivers are about Alzheimer’s disease.

Objective
To characterise family caregivers of people with Alzheimer’s disease and identify their level of knowledge about the disease.

Methods
A quantitative, transversal and descriptive study was carried out. For this, 52 caregivers who are relatives of people with Alzheimer’s disease were identified through a convenience sample from both private homes and day-care centres in the North region of Portugal. A questionnaire was administered that contained the sociodemographic characterisation of the caregivers as well as questions that dealt with different facets of the disease, ranging from pathophysiology to intervention strategies. The questionnaire was designed for this study, underpinned by consistent theoretical bases, and was sent to five experts for evaluation. These experts were nurses with experience in gerontology/Alzheimer’s disease. The questions are essentially closed, with the only open question coming at the end, relating to the difficulties experienced by the family members in caring for the patient.

Results
Focusing on aspects related to literacy, the main results indicate that although 87% of these caregivers know how to define Alzheimer’s disease, only about 30% understand what underlies it, while about 50% show some difficulties in identifying risk factors. Most of them (75%) are able to list symptoms of the disease but only half know how to keep the sick person active. It should be noted that only 38% can identify ways to preserve memory and that about 30% of family caregivers are unaware of the purpose of the medication.

Conclusions
It was found that there is considerable uncertainty among family caregivers about several facets of Alzheimer’s disease. There was also some lack of knowledge about existing resources and support. The study also highlights the fact that the family members questioned do not often ask nurses for information relevant to the care process.

Keywords
Health literacy, Family caregivers, Alzheimer’s disease.

P114
Positive effects of a health promotion program in sedentary elderly with type 2 diabetes
Luís Coelho 1,2, Nuno Amaral 1, João Cruz 1,2, Rogério Salvador 1,2, Paulino Rosa 1,2, Ricardo Gonçalves 1,2, Rui Matos 1,2
1School of Education and Social Sciences, Polytechnic Institute of Leiria, 2411-091 Leiria, Portugal; 2Life Quality Research Centre, 2001-904 Santarém, Portugal
Correspondence: Luís Coelho (coelho@ipleiria.pt)
BMC Health Services Research 2018, 18(Suppl 2):P114

Background
Diabetes is projected to be the 7th leading cause of death by 2030 by WHO (2017) [1]. Physical Activity along with a healthy diet and medication is one of the crucial options to prevent and control diabetes. About 40% of the Portuguese population aged 25 to 79 years-old presents a condition of diabetes or intermediate hyperglycaemia (Observatório Nacional da Diabetes, 2016) [2].

Objective
To examine the impact of a health promotion program in sedentary elderly with type 2 diabetes.

Methods
The program consisted on a 30-minute daily walking routine and a weekly educational session regarding healthy behaviours for 8 weeks. All participants were medicated with insulin and anti-diabetics. Twenty-six elderly diabetics (16 male and 10 female) aged 70.1 ± 8.0 years old, were assessed for Body Mass (BM), Body Mass Index (BMI), Systolic and Diastolic Blood Pressure (SBP, DBP respectively), Waist Circumference (WC), and Capillary Glycaemia (CG). Wilcoxon test was used on inferential analysis for repeated measures (pre-post). Significance level was kept at 5%. The effect size for this test was calculated by dividing the z value by the square root of N, being N the number of observations over the two time points [3].

Results
All parameters measured values decreased significantly from initial to final moments: BM from 80.8 ± 8.9 kg to 78.2 ± 9.0 kg (p=0.000; r=-0.512), BMI 30.2 ± 3.8 kg/m² to 29.1 ± 3.1 kg/m² (p=0.000; r=-0.543), SBP from 143.4 ± 10.9 mmHg to 134.3 ± 10.4 mmHg (p=0.002; r=-0.426), DBP from 79.5 ± 8.6 mmHg to 75.3 ± 8.7 mmHg (p=0.035; r=-0.292), WC from 100.9 ± 7.8 cm to 96.7 ± 6.7cm (p=0.000; r=-0.584), CG from 182.5 ± 563 mg/dl to 124.1 ± 17.7 mg/dl (p=0.000; r=-0.588).

Conclusions
The inclusion of physical activity and the awareness of engaging in healthy behaviours seem to complement the medication-based therapeutic in sedentary elderly with type 2 diabetes. Although the physical activity assessment was self-reported, sport sciences can play an important role in the prescription and monitoring of exercise in clinical patients. Multidisciplinary interventions in community health programs are recommended in order to achieve stronger and consistent results. These should include medical practitioners, physiologists and nutritionists.

References
The urgency for a nursing intervention towards sexual education at Cape Verde: university students’ perception

Sónia Ramalho1,2, Carolina Henriques3,4, Elisa Cacéco1, Maria L. Santos1
1School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 4Multidisciplinary Unit for Biomedical Research, Institute of Biomedical Sciences Abel Salazar, University of Porto, 4050-313 Porto, Portugal

Correspondence: Sónia Ramalho (sonia.ramalho@ipleiria.pt)

BMC Health Services Research 2018, 18(Suppl 2):P116

Background

We know today that knowledge about sexuality is essential for young people to live in a society that allows to develop healthy attitudes and behaviours. To that end, health professionals, namely nurses, should be able to Educate for Sexuality in order to contribute for the improvement of affective-sexual relationships among the young; contribute to the reduction of possible negative occurrences resulting from sexual behaviours, such as early pregnancy and sexually transmitted infections (STIs), and contribute to conscious decision-making in the area of health education/sex education [1–4].

Objective

To evaluate young people’s knowledge about sexuality.

Methods

A descriptive, cross-sectional study using a questionnaire consisting of questions related to sociodemographic data, and a questionnaire consisting of twenty questions related to the anatomy of the reproductive system, contraceptive methods and sexually transmitted infections (STIs), and contribute to conscious decision-making in the area of health education/sex education [1–4].

Results

The results show that in a sample of 108 university students, 81.5% female, with a mean age of 21.26 years; 1.9% reported having already been forced by a stranger, family member or older person to have sex, and 10.2% reported having had sex after a party, under the influence of alcohol or drugs. As far as knowledge is concerned, it can be said that the level of knowledge of young people regarding the sexual health aspects is satisfactory, safeguarding that the most erroneous questions were those related to: male anatomy (40.7%) and hormonal physiology of women (25.9%). It was found that 32.4% of the university students did not know/did not answer the questions related to female hormonal processes and their functioning when associated with an oral contraceptive.

Conclusions

It is essential to know what young people know about sexuality, so that specific nursing interventions can be designed to meet their sexual education needs.
P118
Attitude of Cape Verdean young university students towards sexuality
Carolina Henrique1,2, Sónia Ramalho1,2, Maria L Santos1, Elisa Caceiro1
1School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
Correspondence: Carolina Henrique (carolina.henriques@ipleiria.pt)
BMC Health Services Research 2018, 18(Suppl 2):P118

Background
Cape Verde, a country with about 500,000 inhabitants, has a markedly young population, a fact that places special responsibility on the role of local health professionals, in the contexts of sexual and reproductive health, where sexuality issues are included.

Objective
To evaluate the attitudes of Cape Verdean university students towards sexuality.

Methods
A descriptive, cross-sectional study using a questionnaire consisting of questions related to sociodemographic data and the sexual attitudes scale of Gouveia, Leal, Maroco and Cardoso (2010) [1].

Results
The results show that participants of this cross-border research had a mean age of 21.26 years (SD = 2.93), were mostly female (81.5%) and started their sexual activity with a mean age of 17.37 years (SD = 1.31). As far as sexual attitudes are concerned, 11.1% agrees that “one does not have to be committed to the person to have sex with her/him”; 18.5% agree that “casual intercourse is acceptable”; 76.9% totally disagree with “I would like to have sex with many partners”; 74.1% disagree completely that “it is right to have sex with more than one person during the same time period” and 36.1% agree that “sex is primarily a physical activity”. 10.2% of young people agree that “sex, by sex alone, is perfectly acceptable”, 33.3% agree that “sex is primarily a bodily function, just like eating”. Regarding the permissiveness of university students in relation to occasional/non-engaging sex, they present a significant level of agreement (M = 14.44, Sd = 3.66, Xmax = 24.00) which relates to instrumentality (M = 11.93, SD = 2.62, Xmax = 19.00).

Conclusions
Data shows that young Cape Verdean university students seek to have sexual relations with respect for their partner, although they agree with sex without commitment, closely associated with the vision of the sexual act as a corporeal function response.

References

Keywords
Youth, Sexuality, Attitudes, Cape Verde.

P119
Central auditory processing and sleep deprivation
Diogo Garcia, Carla Silva
Audiology Department, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal
Correspondence: Diogo Garcia (diogojorge04@gmail.com)
BMC Health Services Research 2018, 18(Suppl 2):P119

Background
Sleep deprivation is highly prevalent in modern society. It has been linked to significant consequences on physical and mental health and neurodevelopment. However, the impact of sleep deprivation on central auditory processing is not well established.

Objective
The objective of this study was to investigate the effect of sleep deprivation on central auditory processing.

Methods
The study was a randomized, double-blind, placebo-controlled trial. Participants were randomly assigned to a sleep deprivation group (SD group) or a control group (CG group).

Results
The SD group showed significantly poorer performance on several measures of central auditory processing compared to the CG group. These changes were associated with changes in sleep quality, as measured by self-reported sleep diaries and actigraphy.

Conclusions
The results suggest that sleep deprivation negatively affects central auditory processing, highlighting the importance of adequate sleep for cognitive function.

Keywords
Central auditory processing, Sleep deprivation, Sleep quality.
Background
Auditory Processing is a natural process of taking in sound through the ear and having it travel to the language area of the brain to be interpreted. Sleep deprivation may influence this process.

Objective
To evaluate the impact of sleep deprivation, for a 24-hour period, on central auditory processing in healthy young adults.

Methods
Fourteen (14) healthy young adults were selected, 9 of which (64.3%) were female and 5 (35.7%) were male, aged 18-29 years. The subjects were submitted to audiological evaluation using tonal audiometry and the threshold of 1 in 1 dB was obtained in the frequencies of 250Hz, 500Hz, 1000Hz, 2000Hz, 4000Hz and 8000Hz, alternating disyllabic dichotic listening test Staggered Spondaic Words Test (SSW). The evaluation of central auditory processing, as well as the determination of the auditory threshold was performed in two situations: without sleep deprivation and after 24 hours of sleep deprivation.

Results
At the level of the Audiogram, the reduction of the auditory thresholds after sleep deprivation in the frequencies of 500Hz and 1000Hz, around 3dB, increased in the frequency of 2500Hz and 4000Hz, between 1 and 9dB, and decreased in the right ear in frequencies of 2000Hz and 8000Hz. In the right ear, none of the differences found were statistically significant. In the left ear the auditory threshold increased at the frequency of 2000Hz about 5dB, and decreased in the frequencies of 2500Hz, 5000Hz, 10000Hz, 4000Hz and 8000Hz between 1 and 8dB, without statistically significant differences. In the SSW, there was a slight decrease in the percentage of correct answers in both ears, as well as in the percentage of total hits, after sleep deprivation. In none of the ears there were statistically significant differences in SSW results before and after 24 hours of sleep deprivation.

Conclusions
The results demonstrate that there are no statistically significant changes before and after 24h of sleep deprivation, both at the level of the Auditory Threshold and in the SSW.

Keywords
Central Auditory Processing (PAC), Sleep Deprivation, Staggered Spondaic Words Test (SSW), Audiological Evaluation.
Background
The family must be understood as a natural context of growth, involving the notion of complexity, of blood and/or affective bonds, generating love, but also suffering. The systemic view of the family considers the family as a whole, in which its members interact with one another, being that the imbalance of the system can cause imbalance in the individual and vice versa. The Family Nurse can be the reference professional, ensuring for the specialized accompaniment of the family, as a care unit, throughout the life cycle.

Objective
To know the perception about “family” and “family health nursing” by future family nurses.

Methods
A descriptive, cross-sectional study using a questionnaire consisting of questions related to sociodemographic data, and open questions regarding conceptual understanding of family and family health nursing. A total of 13 nurses participated in the study to develop skills in the field of family health nursing. All formal and ethical procedures have been taken into account.

Results
Nurses report that they (100%) never attended before any training course in the field of family health nursing, recognizing the importance of knowing who the family members are (92.3%). 38.5% disagrees that the presence of family members alleviates their workload and 23.1% state that the presence of family members makes them feel that they are being evaluated. Mostly, the family is defined as a group of people with a common link (n= 10). Family health nursing is seen as: caring for the family; personalizing and integrating the nursing care provided to the person and to the family; the existence of a family nurse who knows all its members; the one that equates the care to the individuals according to the characteristics of the family; a health support of the group; a nurse that focuses mainly on the patient and on the family, in partnership with the respective family doctor.

Conclusions
Given the data obtained, it is understood that the conceptualization of family and family health nursing should be clarified so that nurses can focus on the internal dynamics of the families and their relationships, family structure and functioning. This can be as such, that the relationship of the different subsystems, of the family as a whole and with the surrounding environment, generates changes in the intrafamilial processes and in the interaction of the family with the environment.

Keywords
Family, Nurses, Family nursing.

Methods
Scientific articles were searched according to the search engines B-, on, PubMed, Scielo and ScienceDirect, obtaining a total of 48 articles. After applying the inclusion criteria, 12 articles were analysed in more detail, 4 of which were selected to integrate this systematic review of the literature.

Results
After a systematic review of all articles, we found data reporting a decrease in the amplitude of the response wave vestibular evoked myogenic potential (cVEMP), an increase in average scores in the Dizziness Handicap Inventory (DHI), and an alteration of the classification of the caloric response (normal → hyporeflexia and/or hyporeflexia → areflexia), in the postoperative period. However, it is not possible, to conclude that these vestibular changes are directly related to the placement of the CI. The use of a protocol evaluating vestibular function at the pre- and post-surgical periods was not verified, nor was the anatomical relationship between the cochlea and the vestibule and semi-circular canals (SSC).

Conclusions
We conclude that the studies directed to the vestibular evaluation during the protocol of placement of CI are reduced and without conclusions on the long term, since this follow up was done within a short time after its placement. There is a lack of a basic protocol, which helps the health professionals involved in the process to evaluate the vestibular system, as well as the sensitization of these to the possible influence of the CI insertion surgery in this system.

Keywords
Audiology, Vestibular Disorders, Dizziness, Cochlear Implant, cVEMP.

P122
The dizziness in patients with cochlear implants
Ana Rosado, Carla Silva
Audiology Department, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal

Correspondence: Ana Rosado (anarosadowsorosado@gmail.com)

BMC Health Services Research 2018, 18(Suppl 2):P122

Background
The cochlear implant (CI) is a surgical method widely used today for the (re)habilitation of individuals with bilateral, severe to profound sensorineural hearing loss. Due to the proximity between the cochlea and the surrounding structures without vestibular system, and a delivery endolymphatic fluid, there may be a relationship between this form of (re)hearing activation and vestibular dysfunctions presented after a cochlear implant placement surgery.

Objective
Through a systematic review of the literature, we intend to determine the post-surgical vestibular changes existing in individuals submitted to CI placement, as well as to understand the procedures involved in this evaluation.

Methods
Scientific articles were searched according to the search engines B-, on, PubMed, Scielo and ScienceDirect, obtaining a total of 48 articles. After applying the inclusion criteria, 12 articles were analysed in more detail, 4 of which were selected to integrate this systematic re-review of the literature.

Results
After a systematic review of all articles, we found data reporting a decrease in the amplitude of the response wave vestibular evoked myogenic potential (cVEMP), an increase in average scores in the Dizziness Handicap Inventory (DHI), and an alteration of the classification of the caloric response (normal → hyporeflexia and/or hyporeflexia → areflexia), in the postoperative period. However, it is not possible, to conclude that these vestibular changes are directly related to the placement of the CI. The use of a protocol evaluating vestibular function at the pre- and post-surgical periods was not verified, nor was the anatomical relationship between the cochlea and the vestibule and semi-circular canals (SSC).

Conclusions
We conclude that the studies directed to the vestibular evaluation during the protocol of placement of CI are reduced and without conclusions on the long term, since this follow up was done within a short time after its placement. There is a lack of a basic protocol, which helps the health professionals involved in the process to evaluate the vestibular system, as well as the sensitization of these to the possible influence of the CI insertion surgery in this system.

Keywords
Audiology, Vestibular Disorders, Dizziness, Cochlear Implant, cVEMP.

P123
Practice of episiotomy during labour
Manuela Ferreira1, Onélia Santos2, João Duarte1
1Instituto Politécnico de Viseu, 3504-510 Viseu, Portugal; 2Centro Hospitalar Cova da Beira, 6200-251 Covilhã, Portugal

Correspondence: Manuela Ferreira (mmcfereira@gmail.com)

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Background
The World Health Organization (WHO, 1996) recommends the use of limited episiotomy since no credible evidence that its widespread use or routine practice has a beneficial effect.

Objective
To demonstrate scientific evidence of the determinants of the practice of selective episiotomy in women with normal/eutocic delivery; to identify the prevalence of episiotomy; and analyse the factors (sociodemographic variables, variables related to the newborn, contextual variables of pregnancy and contextual delivery) that influence the practice of episiotomy.

Methods
The empirical study I (part I) followed the systematic methodology of literature review. A search of studies published between January 2008 and December 23, 2014, was made in the databases: EBSCO, PubMed, Scielo, RCAA. The studies found were evaluated taking into account the inclusion criteria previously established. Two reviewers assessed the quality of the studies to include using a prospective, randomized and controlled grid for critical evaluation. After critical evaluation of the quality of the study, 4 research articles that obtained a score between 87.5% and 95% were included.

The empirical study II (part II) is part of a quantitative, cross-sectional, descriptive, retrospective study, developed in the Obstetrics Service of Hospital Cova da Beira, according to a non-probability sampling process for convenience (n = 382). Data collection was executed by consulting medical records of women aged ≥ 18 years who had a vaginal delivery with a live foetus after 37 weeks of gestation.

Results
Evidences that episiotomy should not be performed routinely and that should be limited to specific clinical situations were found. While performing selective episiotomy, when compared to routine episiotomy, a lower risk of trauma of the posterior perineum was
associated with less need for suturing and fewer healing complications. Studies carried out on a sample of 382 women, aged between 18-46 years, which did not carry episiotomy in 41.7% of the cases, pointed to the relevance of selective episiotomy. Among the sample, a significant number of women with eutocic delivery (80.5%), with suture (95.0%), grade I lacerations (64.9%), perineal pain (89.1%) were subjected to episiotomy (58.3%). Among the group of women undergoing episiotomy (91.4%), most of the babies born presented a normal weight (92.3%).

Conclusions
In view of these results and based on the available scientific evidence recommendations given for several years, that a more selective use of episiotomy should be made; it is suggested that health professionals should be more awake to this reality, so we can override the resistance and barriers against the selective use of episiotomy.

Keywords
Eutocic Childbirth, Selective Episiotomy, Routine episiotomy.

P124
RNAO’s Best Practice Guidelines in the nursing curriculum – implementation update
Ana V Antunes1, Olga Valentin1, Fátima Pereira1, Fátima Frade1, Cristiana Firmino1, Joana Marques1, Maria Nogueira1, Luís Sousa1,2
1Escola Superior de Saúde Atlântica, 2730-036 Barcarena, Portugal; 2Hospital Curry Cabral, Centro Hospitalar Lisboa Central, 1069-166 Lisboa, Portugal

Correspondence: Ana V Antunes (vantunes@usatlantica.pt)

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Background
In the last 30 years Nursing Education in Portugal went through several changes which directly impacted on the professional development model and on the recognition of nurse’s scope of practice. Since the Declaration of Bolonha, nursing students are provided with a more practical and profession oriented nursing training [1, 2]. As our professionals’ skills become more recognized in the global health market, also our need to improve education and professional development rises. The best way to enhance the quality of practice education provided to undergraduate nursing students and to improve clinical outcomes is by enriching the academic curriculum with evidence-based nursing practices (EBNP) [3]. The Best Practice Guidelines Program (BPGP) was developed by the Registered Nurses Association of Ontario (RNAO) to support EBNP [4].

Objective
Provide an update on the process of implementation of RNAO’s Best Practice Guidelines (BPGs) in the nursing curriculum.

Methods
The implementation process was supported by the RNAO’s Toolkit for Implementing Best Practice Guidelines (BPGs) [5]. It is a comprehensive resource manual, grounded in theory, research and experience, that provides practical processes, strategies and tools to both Providers, Educational Institutions, Governments, and others committed to implement and evaluate BPGs.

Results
The BPGs selection and implementation brought together some of the suggested activities from the six steps of the manual. It resulted in the selection of three clinical guidelines (Engaging Clients Who Use Substances [6]; Prevention of Falls and Fall Injuries in the Older Adult [7]; Primary Prevention of Childhood Obesity [8] and a Healthy Work Environments Guideline (Practice Education in Nursing, [9]). We considered two main areas to intervene, in order to address the challenge of generating scientific evidence for nursing practice: the academic and the clinical setting (partner institutions, where students undertake their clinical practice). The implementation process included three fundamental players from both settings: professors, nursing students and clinical nursing instructors. To evaluate our performance and measure the improvements, we created structure, process and outcome indicators for each guideline. Data collection tools were first used in the curricular units that precede clinical teaching, and results will be processed and analysed.

Conclusions
Professors, students and partner institutions were successfully engaged in the initiative. We are investing in an action plan to embed the evidence-based practice culture, through an orientation program for clinical nursing instructors. The strategy is to strengthen the relationship with providers in order to standardize evidence-based procedures and improve both nurses’ education and quality of care.

References

Keywords
Evidence-Based Nursing, Nursing Education, Substance-Related Disorders, Accidental Falls, Pediatric Obesity.

P125
Swimming practice and hearing disorders
Mara Rebelo, Carla Silva
Audiology Department, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal

Correspondence: Mara Rebelo (mararebelo@hotmail.com)

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Background
Health assessment, promotion and prevention are a crucial pillar in the face of emerging trends and threats. In fact, disease prevention is surely the way to go. This is not to say that we should neglect the treatment of disease, but rather that we must make a clear bet on its prevention according to our daily behaviour and the circumstances in which we live. The practice of swimming is recommended, especially for children, since it presents benefits, namely in the treatment of respiratory diseases, allergic problems and in the improvement of motor coordination and/or postural problems. However, during swimming lessons, children are exposed to numerous harmful risk factors to the middle ear and the outer ear. Therefore, preventive measures are essentially the eviction of some factors that increase the associated risks.

Objective
To analyse possible audiologial changes in swimming children, aged between 3 and 10 years. It is also intended to sensitize educators.
about the risk factors associated with possible hearing loss, even if temporary.

Methods
The sample consisted of 56 students from the School Group of Bene-dita – Municipality of Alcobaça. All children underwent: otoscopy, tympanogram and tonal audiogram of screening, after the prior authorization of their legal representatives for their participation in the study.

Results
Among the 112 otoscopies performed were: 85.7% without alterations in the right ear and 83.9% in the left ear. Of the 56 individuals participating in the sample, it was verified that 17.9% had anamnestic alterations, of which 20.7% were swimming practitioners and 14.8% did not practice swimming. Of the 29 swimming practitioners, 6.9% had a type B tympanogram, of which 7.1% in the 3 to 5 age group, and 6.7% in the 6 to 10 age group.

Conclusions
It seems unlikely that swimming practice is directly related to the increase of middle ear secretions, and possible auditory alterations, given the minimal differences observed between swimmers and non-swimmers. Swimming practice beyond the malefic factors can to some extent be associated with beneficial factors, both in promotion and in the prevention of middle ear health.

Keywords
Hearing Loss, Swimming, Children, Middle ear infections, Audiological changes.

P126
The impact of physical activity on spirometric parameters in non-institutionalised elderly people
Fernanda Silva1, João Petrica1,2, João Serrano1,3, Rui Paulo1,2, André Ramalho1,3, José P Ferreira1, Pedro Duarte-Mendes1,2
1Department of Sports and Well-being, Polytechnic Institute of Castelo Branco, 6000-266 Castelo Branco, Portugal; 2Centro de Estudos em Educação, Tecnologias e Saúde, Instituto Politécnico de Viseu, 3504-510 Viseu, Portugal; 3Research on Education and Community Intervention, 4411-801 Arcoselo – Vila Nova de Gaia, Portugal; 4Research Unit for Sport and Physical Activity, University of Coimbra, 3040-248 Coimbra, Portugal
Correspondence: Fernanda Silva (f.m.as.298@hotmail.com)
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Background
Physical activity decreases as a result of the ageing process. Therefore, the elderly tend to spend more time adopting sedentary behaviours [1]. The respiratory system also undergoes progressive involution with age, resulting in anatomical and functional alterations [2]. The positive relationship between physical activity and spirometric parameters has been thus confirmed [3]. It is recommended that the elderly should accumulate at least 30 minutes of moderate-to-vigorous-intensity physical activity per day [4].

Objective
The aim of this paper is to verify the existence of differences regarding spirometric values between two groups of people: those who complied and those who did not comply with the Global Recommendations on Physical Activity for Health [4].

Methods
The current study included 36 participants of an average age of 72.28, both male and female (SD= 6.58). The group which has fulfilled the recommendations included 16 elderly individuals (53.7 ± 24.39 minutes); the group which has not fulfilled the recommendations included 20 elderly individuals (15.95 ± 7.79 minutes). Physical activity was assessed using accelerometry (ActiGraph®, GT1M model, Fort Walton Beach, Florida, EUA). Data were recorded for three consecutive days and 600 minutes of daily recording, at least. Spirometry tests were performed using the Cosmed® Microquark spirometer. The following parameters were analysed: Forced Vital Capacity (FVC), Forced Expiratory Volume in one second (FEV1), Peak Expiratory Flow (PEF) and Expiratory Volume in one second and Forced Vital Capacity rate (FEV1/FVC). In order to analyse data, descriptive and inferential statistics were used. The Shapiro-Wilk test was applied to assess normality, whereas the Mann-Whitney test and the t-Test were used for independent samples.

Results
The group which has fulfilled the recommendations on physical activity has achieved better percentage spirometric values in FEV1, PEF and VEF1/FVC. However, significant differences were only found in VEF1/FVC% (p= 0.023).

Conclusions
The results therefore suggest that compliance with the Global Recommendations on Physical Activity for Health is associated with better VEF1/FVC% values in non-institutionalised elderly people.

Acknowledgements
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References

Keywords
Accelerometry, Recommendations on physical activity, Elder, Spirometry.

P127
Predictors of abandonment of exclusive breastfeeding before 6 months
Cristiana Afonso, Cristina Lopes, Fernanda Pais, Suzi Marques, João Lima School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
Correspondence: Cristiana Afonso (cristiana oa@hotmail.com)
BMC Health Services Research 2018, 18(Suppl 2):P127

Background
The World Health Organization (WHO) recommends exclusive breastfeeding up to 6 months of age, considering its nutritional, immunological, psychological and economic benefits. However, according to the Inquérito Alimentar Nacional e de Atividade Física, only about 46% of the children were exclusively breastfed for less than 4 months and only 21.6% for 6 months or more.

Objective
This study aimed to identify the predictors that most influence mothers in the decision to not to exclusively breastfeed until 6 months.

Methods
A review of the literature on the main determinants of exclusive breastfeeding was carried out, and an inquiry was then compiled with the identified predictors. In this context, mothers who had not breastfed or had not exclusively breastfed until 6 months of age were asked to choose the determinant that best suited their situation. The inquiry was made available through several online
Correspondence: Mariana Araújo (mariana_msda@hotmail.com)

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Auditory training in children and youngsters with learning disabilities

Mariana Araújo, Cristina Nazaré
Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal
Correspondence: Mariana Araújo (mariana_msda@hotmail.com)
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Background
Hearing has a fundamental role in the learning process, and studies had showed that some children and youngsters, with normal hearing, could present auditory processing disorders with possible implications in the learning process. It is also known that not all learning problems are due to auditory processing disorders and all cases of auditory processing disorders do not lead to learning problems. Studies also point out that an adequate and personalized auditory training may be a viable option in the rehabilitation of auditory information processing in the central nervous system (brain neuroplasticity training), being the early assessment and intervention important to minimize the associated consequences, such as the possible difficulties on the learning process.

Objective
To analyse the influence that auditory training has on the improvement of auditory processing disorders of children and youngsters, with learning disabilities.

Methods
For this purpose was conducted a systematic literature review with search of scientific papers on electronic databases B-on, PubMed, Sciencedirect and SciELO with keywords such as auditory training, auditory processing, auditory processing disorders, learning disabilities, learning difficulties, children and youngsters (in Portuguese, English or Spanish). For this review were established inclusion criteria such as: publication type and date (original articles available since 2007); sample (in accordance with our purpose) and tests used (to evaluate and training the auditory processing).

Results
After the search strategies five articles in accordance with the pre-established inclusion criteria were selected from out of the 127 found.

Conclusions
The auditory training is effective in the rehabilitation of auditory processing disorders in children and youngsters with learning disabilities, and studies showed that a specific diagnosis of the abilities affected is fundamental, in order to achieve the perfect and most efficient training plan for each individual, as well as, a continuous re-evaluation to adjust the training. Since it is a complex interaction between those disorders it is still necessary to carry out further studies in this area that should try to establish some guidelines and try to clarify the plan of the auditory training program.

Keywords
Auditory training, Auditory processing disorders, Learning disabilities, Children, Youngsters.
P130
Lateralization of the visual word form area in patients with alexia after stroke
Inês Rodrigues1,2, Nâdia Canário, Alexandre Castro-Calda3
1Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3Instituto de Ciências da Saúde, Universidade Católica Portuguesa, 1649-023 Lisboa, Portugal
Correspondence: Inês Rodrigues (ines.rodrigues@ipleiria.pt)
BMC Health Services Research 2018, 18(Suppl 2):P130

Background
Knowledge of the process by which visual information is integrated into the brain reading system promotes a better understanding of writing and reading models.

Objective
This study aimed to use functional Magnetic Resonance Imaging (fMRI) to explore whether the Blood-oxygen-level dependent (BOLD) contrast imaging patterns, of putative cortical region of the Visual Word Form Area (VWFA), are distinct in aphasia patients with moderate and severe alexia.

Methods
Twelve chronic stroke patients (5 patients with severe alexia and 7 patients with moderate alexia) were included. A word categorization task was used to examine responses in the VWFA and its right homolog region. Patients performed a semantic decision task in which words were contrasted with non-verbal fonts to assess the lateralization of reading ability in the ventral occipitotemporal region.

Results
A fixed effects (FFX) general linear model (GLM) multi-study from the contrast of patients with moderate alexia and those with severe alexia (FDR, p = 0.05, corrected for multiples comparisons using a Threshold Estimator plugin (1000 Monte Carlo simulations), was performed. Activation of the left VWFA was robust in patients with moderate alexia. Aphasia patients with severe reading deficits also activated the right homolog VWFA.

Conclusions
This bilateral activation pattern only in patients with severe alexia could be interpreted as a result of reduced recruitment of the left VWFA for reading tasks due to the severe reading deficit. This study provides some new insights about reading pathways and possible neuroplasticity mechanisms in aphasia patients with alexia. Additional reports could explore the predictive value of right VWFA activation for reading recovery and aid language therapy in patients with aphasia.

Keywords
Stroke, Aphasia, Alexia.

P131
Sexuality in women with oncological pathology
Fílomena Paulo1, Manuela Ferreira2
1Centro Hospitalar Tondela-Viseu, 3509-504 Viseu, Portugal; 2Instituto Politécnico de Viseu, 3504-510 Viseu, Portugal
Correspondence: Fílomena Paulo (filopaulo@live.com.pt)
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Background
It is a challenge for current nursing to care for women with oncological pathology, in what a nursing philosophy of care is concerned, and whose main focus of care are women in their multidimensional pathology, in what a nursing philosophy of care is concerned, in what a nursing philosophy of care is concerned. It is a challenge for current nursing to care for women with oncological pathology, in what a nursing philosophy of care is concerned.

Objective
To identify some determinant factors of physical well-being, quality of life and sexuality in women with oncological disease.

Methods
The methodology that guided the research was an integrative review (IR) of literature. A survey was carried out in the databases: LILACS, SCIELO, Google Academic, BDENF and B-ON, between 2012 and 2016, starting from the previously defined inclusion criteria. The selected studies were subsequently evaluated, 71 articles emerged from this research study strategy. After reading all the abstracts of the articles, 27 were selected, including integrative review articles, systematic reviews of cross-sectional studies and descriptive and exploratory studies, whose contents were of interest to this review.

Results
After analysing the articles, it was concluded that sexual health and treatments are important aspects for the quality of life of women with oncological disease and that radical mastectomy has repercussions on body image and sexual function, since it affects self-esteem and the feeling of femininity and sexuality. Factors such as hair loss, gain or loss of weight, chronic fatigue, nausea, pain, stress, feeling of not being a complete woman, decreased arousal, lack of interest or dissatisfaction are determinants for a woman’s sexual activity.

Conclusions
Integrative care for women with oncological pathology is a challenge for health professionals. The strategies to be adopted involve the inclusion of women’s sexuality in the nursing care plan, without taboos or prejudices, because the evidence identifies the need for intervention in this field to improve, effectively, the quality of life of these women.

Keywords
Sexuality, Woman, Oncology, Integrative care, Quality of life.

P132
Patient compliance to arterial hypertension treatment: integrative review
Diana Tavares1, Célia Freitas2, Alexandre Rodrigues3
1USF Salinas – Agrupamento de Centros de Saúde do Baixo Vouga, Portugal; 2Center for Research in Health Technologies and Services, Aveiro University, Higher School of Health, 3810-193 Aveiro, Portugal; 3Center for Health Studies and Research of the University of Coimbra, Aveiro University, Higher School of Health, 3810-193 Aveiro, Portugal
Correspondence: Diana Tavares (diana.marsilla@ua.pt)
BMC Health Services Research 2018, 18(Suppl 2):P132

Background
Cardiovascular diseases are the main cause of worldwide mortality, and hypertension is an important public health problem [1]. Nonadherence to treatment influences the health of the patient and can generate several complications. In this way, health care providers are confronted with the best strategies to promote effective management of the disease, together with patients and families. The nursing consultation seems to be a privileged setting for assisting patients for healthy behaviour changes with a personalized intervention adjusted to the needs of each one [2, 3].

Objective
To analyse the factors that promote or inhibit adherence to treatment and to identify the nursing interventions that determine treatment adherence.

Methods
We conducted an integrative literature review with qualitative and quantitative studies through electronic databases Scielo, Scopus, Medline, LILACS and B-on, using the following selected research discriminators, “adherence”, “patient”, “hypertension” and “nursing care” from the DeCs and MeSH for articles published between 2011 and 2016. The PICOD [4, 5] method and the QualSyst [6] tool were used.
to evaluate the research question and the quality of the articles, respectively.

Results
In this research 372 articles were found, and 10 were selected, corresponding to 2,565 hypertensive patients over 18 years old, of whom 64% were female. Despite the differences found in the methodologies of these studies, the results indicated a poor adherence to the treatment [7]. The analysis resulted in two major categories that explain patients’ adherence to the treatment of hypertension, namely the factors that influence adherence and nursing interventions. The most significant factors that inhibit adherence are complex drug regimens, lack of knowledge, and poor physical activity. The nursing interventions that enhance adherence were the adoption of continued educational strategies.

Conclusions
Patient adherence is a complex issue with a huge burden for the health system because it not only implies the change of patient behaviours, but also other factors like the involvement of caregivers and families. Considering the factors described in this review, the nursing consultation, through the definition of educational strategies, seems to increase patient adherence to treatment. In future research, guidelines will be suggested that aim to increase adherence to treatment.

References

Keywords
Patient compliance, Nursing care, Hypertension.

P133
Didactic material as an intervention strategy in homecare for families of patients with mental disorders
Luísa FT Ferreira 1, Ednêa AN Cerchiari 1, Simara S Elias 1, João B Almeida 1
1 Mato Grosso do Sul State University, 79804-970 Mato Grosso do Sul, Brazil, 2 Centro Universitário Salesiano de São Paulo, 13467-600 Americana, São Paulo, Brazil
Correspondence: Luísa FT Ferreira (luissafft@gmail.com)
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Background
On a daily basis, we have discussed and reflected about health education on public care as a way of connection between health care professional and patients, with the purpose of, not only to inform, but also to exchange knowledge and experiences.

Objective
To elaborate and validate a Practical Guide of Care for family members of patients with mental disorders: guidelines and highlights.

Methods
This is a qualitative, descriptive, ongoing study with relatives of inpatient patients with mental disorder of a university hospital in Brazil, starting in August 2014 and finishing by October 2018.

Results
Five families, a total of 9 people, were interviewed through a semi-structured questionnaire. In order to create the Practical Guide, the methodological steps of the Popular Education process of Paulo Freire were used to analyse the data, as following: Thematic investigation; Thematic and Problematization. The Practical Guide of Care for Families of Patients with Mental Disorders: Guidelines and Highlights, was created in 2015 and published in 2017, containing 32 pages printed on coloured paper with watercolour pictures and information arranged in short and direct texts, related to the home care of patients with mental disorders. The guide validation process began in January 2018 and is going along with professional judges that were chosen by their expertise, with one of each area: physician, psychiatrist, psychologist, nurse, social worker, pharmacist and occupational therapist. For collecting data, an instrument adapted from the Oliveira’s (2006) [1] study was used, allowing apparent and content evaluation. The instrument has affirmations about the evaluated material and was developed based on a Likert scale. The data collected will be analysed through simple statistics and organized through tables, respecting the ethical aspects proposed by Resolução 466/2012 of the National Health Council, regarding research with humans. An apparent and content evaluation with the relatives of the patients will also take place.

Conclusions
We expect that the final product of this study, the Validated Practical Guide, will provide support for adoption of increasingly effective strategies for the home treatment of patients with mental disorders.

References

Keywords
Teaching materials, Public Health education, Mental Disorder.

P134
Family health in Leiria council: study of some determinants
Marta Serrano, Rodrigo Correia, André Branco, Luís Mousinho, Teresa Kraus 1
1 School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal, 2 Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
Correspondence: Teresa Kraus (teresa.kraus@ipleiria.pt)
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Background
Family is the main responsible unit for personal development, and any change on a member causes alterations to the entire family [1]. The binomial family-determinants has an impact in education, socialization, in healthcare, on believes and values of the family, as well as in the well-being and health of its members.

Objective
To characterize the families according to its composition, family cohesion and adaptability, protective factors, health state and its determinants, identify points of intervention on the community and family.

Methods
This is a quantitative, correlational and transversal study, whose data was collected in February and March 2017, in the council of Leiria, by the application of a questionnaire which evaluated sociodemographic factors of the families.
Simulated as a pedagogical strategy in nursing teaching: teachers’ perspective

Cláudia Chambel1, Catarina Carreira1, Catarina Pinheiro1, Luís Ramos1, Catarina Lobão1,2

1School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal

Correspondence: Catarina Carreira (cataricacarreira01@hotmail.com)

Background

Currently, classes with the resource of simulated practice have become fundamental to the nursing degree. In this way, teachers who teach classes with the resource of simulated practice feel obliged to prepare their students for clinical situations and there is a need to increase their training on new teaching strategies, such as simulation. Consequently, it becomes important for the development of students’ competences, being therefore essential to deepen knowledge in this area.

Objective

We intend to know the perception of teachers of the nursing graduation course on the use of simulated practice as a pedagogical strategy.

Methods

To achieve our objective, we developed a research study using a qualitative approach and a semi-structured interview applied to seven teachers who teach classes with the resource of simulated practice in Escola Superior de Saúde de Leiria.

Results

From the results of our study, we verified that for the teachers, the simulation is a pedagogical strategy important in the creation of scenarios, a facilitator of the learning process that contributes to the increase of the security, confidence, satisfaction, motivation and development of technical and non-technical competences, for the formation of professional identity, management of autonomy, development of critical thinking and standardization of nursing care. Throughout the interviews they identified constraints in the use of simulation, such as: economic and material resources, realism, time available for training resourcing to simulators and the constitution of classes, since the number of students is considered excessive, and the personality of the students is also called into question. To overcome the constraints mentioned above, teachers appeal for the acquisition of material, in sufficient numbers to respond to the constitution of the classes and the desired realism. They affirm that the practical classes should have a superior workload, with unfolding of the classes, thus increasing the time given to debriefing.

Conclusions

Our results agree with the opinion of Gomes & Germano (2007) [1], Guhde (2011) [2] and Amendoeira, et al., (2013) [3], when they affirm throughout their studies that simulated practice allows a better articulation of the theoretical content with the practice, facilitating the learning of the contents taught in theory, via a consequent reflection of previous learning in the context of clinical practice, with the development of students’ competences. In summary, the teachers interviewed highlighted the importance of simulation, to answer to our research question, once they recognize the importance of simulation in the health field.

References

Keywords
Simulation, Nursing, Training.

P136
Simulation as a pedagogical strategy in nursing teaching: students’ perspective
Cláudia Chambel1, Catarina Carreira1, Catarina Pinheiro1, Luís Ramos1, Catarina Lobão1,2
1School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
Correspondence: Cláudia Chambel (simulacaoenfermagem@gmail.com)
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Background
Nowadays, students increasingly recognize the importance of using simulated practice as an excellent pedagogical strategy, since it leads to experience situations very similar to reality, in an environment free of risks and penalties, which allows reflection and eventually to be repeated within useful time, thus leaving them readier to practice, in clinical situations.

Objective
We intend to know the perception of students of the nursing degree, on the use of simulated practice as a pedagogical strategy.

Methods
To achieve this, we developed a research study using a qualitative approach and a semi-structured interview applied to six students of the nursing degree of Escola Superior de Saúde de Leiria.

Results
From the results achieved we verify that the students indicate that the simulation is a pedagogical strategy, that facilitates the learning process and contributes to safety, confidence, satisfaction, motivation and development of technical and non-technical skills, with the recreation of scenarios closer to reality. However, they identify some constraints in the use of simulation, such as: economic resources for the acquisition of more recent and sophisticated material; realism, because the available material doesn’t allow feedback; time available for simulated practice and the constitution of classes (since they consider that the number of students is excessive and also the different personality of the students, because some students can’t take advantage of this strategy).

To overcome the constraints mentioned above, nursing students appeal for the acquisition of new and recent material, in sufficient number to overcome the heterogenic constitution of the classes and the desired realism. They affirm that practical classes should contribute more to the workload of the degree and should receive more attention from the teacher (either reducing the number of students or allowing the practical classes to be taught by two teachers simultaneously).

Conclusions
Our findings are in line with studies which states that high fidelity simulation facilitates the students’ learning and acquisition of competencies, and results in increased motivation, satisfaction, critical thinking, and clinical decision-making. Also, Batista, Pereira and Martins (2014) [1] point out that in order for the simulated practice to reach its maximum exponent of realism, it is necessary equipment, environmental conditions similar to clinical practice and a high-fidelity simulator. In summary, the students interviewed highlight the importance of simulation in the health field.

References

Keywords
Simulation, Nursing, Training.

P137
Partnership between nurses and security forces to reinforce literacy in the use of child safety seats
Rosa Moreira1, Anabela Almeida2
1Hospital Center Cova da Beira, 6200-251 Covilhã, Portugal; 2Research Unit in Business, University of Beira Interior, 6201-001 Covilhã, Portugal
Correspondence: Anabela Almeida (aalmeida@ubi.pt)
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Background
In Portugal, the low literacy in health is recognized. Literacy in health is not only related to education, it arises from a convergence of factors involving education, cultural and social factors and health services. According to data provided by the World Health Organization and World Bank, if awareness is not raised and if global behavior does not change, road traffic injuries will increase dramatically by 2020, becoming the third leading cause of death around the world [1]. Nurses assume that they can be real agents of change and have a role to play in helping to shape the behavior of parents/other educators and to train them in the correct use of child safety seats (CSS).

Objective
The aim of this study was to evaluate whether the partnership between nurses from the Cova da Beira Hospital Center and the regional security forces generated better results in the effective use of CSS of parents or other carers during car transport and whether there is a gap between them and parents who have never been targeted by the team of nurses and security forces.

Methods
A cross-sectional descriptive-correlational study with a quantitative approach, whose participants are the children and their educators from 1st cycle schools in the counties of Fundão, Covilhã and Belmonte. Sample collected by accidental or convenience method, not random. The interview and the observation occur at the same moment with the driver of the vehicle that carries the child and is the subject of stop operation.

Results
The stop operations had a strong pedagogical and informative component, where the drivers were clarified about the data found during the observation, thus offering a good training opportunity in an informal context. In this study, 83% of the sample was for the first time benefiting from a stop operation promoted by the PROVIDAS and it was possible to conclude that drivers who have already been subject to the supervision of PROVIDAS make fewer errors in the use of CSS in relation to drivers who had never been audited by this team.

Conclusions
The results suggest to the positive influence of the training and pedagogical activity of nurses and the importance of the
Background

There is a decrease in the physical activity of future physiotherapists, due to readjustments after admission to college. The high levels of sedentarism, cause diverse physical consequences, especially in terms of corporal image perception. This fact is due to a multidimensional construction of several psychosocial factors, which include motivational factors and behavioural changes.

Objective

To characterize the level of physical activity and satisfaction with body image among students of the first year of graduation in physiotherapy. Analyse the influence of initiating a graduation degree, in terms of physical activity and perception of corporal image and to also identify the main barriers to regular practice of physical activity.

Methods

An analytical cross-sectional study was carried out on a sample of 60 students (13 males and 47 females) from the first year of the physiotherapy degree at Escola Superior de Saúde do Porto (ESS-PP), excluding those who had already attended a graduation degree. A sample characterization questionnaire and the International Questionnaire on Physical Activity (IPAQ) - Short Version were administered through the Qualtrics platform. For the anthropometric measurements and body composition, the Tanita BC-545NTM scale and a Seca stadiometer were used. Satisfaction with body image was assessed through the Body Shape Questionnaire. The questionnaire score and the Body Mass Index (BMI) were calculated. Data and its treatment was performed in the SPSS software, with a level of significance $\alpha = 0.05$.

Results

About 20% individuals of the total sample were physically inactive and 56.7% were moderately active, there were differences in the level of activity between male and female; males were more in a "very active level" than females (61.5 vs 14.9%; $p = 0.008$). To start a graduation degree leads to a decrease in the regular practice of physical activity (78.3 vs 40.0%; $p = 0.001$ before and after, respectively). The main barriers identified for the regular practice of physical exercise were: 71.7% inadequate schedules; 30.0% laziness and 20.0% fatigue. About satisfaction with body image, only females were dissatisfied (30% vs 0%; $p < 0.001$). Starting a graduation degree made the perception of body image worse in 46.7% of the sample, without differences in gender.

Conclusions

There is a high percentage of students physically inactive and dissatisfied with body image, being this process more notorious among the female gender. Being admitted to a graduation degree has shown to influence negatively the level of physical activity and body satisfaction. Inadequate schedules are the main barrier to the practice of a physical activity.

Acknowledgements

We thank all the students of the first year of the degree in Physiotherapy of ESS-Porto of the 2016/2017 school year for the readiness and willingness to collaborate in the present study.

Keywords

Acknowledgements
We thank all the students of the first year of the degree in Physiotherapy of ESS-Porto of the 2016/2017 school year for the readiness and willingness to collaborate in the present study.

Keywords
Physical Activity, Health Promotion, Stress, Academic Success.

P140
Representations of dementia experienced in the first person: a hermeneutic analysis
Carlos Laranjeira1, Helena Quaresma2
1Hospital Distrital da Figueira da Foz, 3094-001 Figueira da Foz, Portugal; 2Escola Superior de Enfermagem de Coimbra, 3046-051 Coimbra, Portugal
Correspondence: Carlos Laranjeira (calaranjeira@sapo.pt)
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Background
The global incidence of dementia has been growing exponentially in recent decades. As a chronic disease, it poses as a threat to physical and social existence, amputating or redefining the roles we assume as socially integrated individuals, leading to a heavy deconstruction on the everyday world.

Objectives
a) Describe the representations of the person with dementia on the disease, after the diagnosis; b) understand the process of adjustment of the person with dementia, from the lived experience.

Methods
The methodological option was an empirical research study of the qualitative type, of phenomenological-interpretative nature and inspired by the hermeneutic philosophy of Paul Ricoeur. Seven people with mild dementia were interviewed, most diagnosed with Alzheimer’s disease, with a mean of 71 years old. For each participant, two interviews were conducted in a natural setting [residence], with data collection occurring between July and October 2017.

Results
The main focus of the present analysis focused on the identity of the person with dementia. Two main themes were created, taking into account the factors that may influence their (de)construction. The first theme “life in suspense” aims to describe knowledge and representations about dementia. Regarding the analysis of the lived experience, it was represented by the second theme “map the transition process - living on the edge of the cliff”.

Findings from this study indicate that disease representations are useful frameworks for developing an understanding of how people with dementia try to manage the threats posed by disease as they negotiate the day-to-day process. The development of disease representations reflects an understanding that the progressive decline imposed by dementia is linked to a set of consequences that are circumscribed in the personal, relational, and transcendental dimensions.

Conclusions
In summary, the person with dementia faces several challenges, the first one stems from the need to manage the treatment; the second arises from the need to create and assign meaning to their social roles and finally the need to deal with the emotional consequences that arise from the process of disease by providing the person with adaptive strategies that promote their adjustment. In fact, this study, in addition to revealing the lived experience of the person with dementia, has the potential to contribute to the improvement of nursing care in mental health.

Keywords
Mild dementia, Lived-experience, Hermeneutic, Illness representation.

P141
The institutionalized elderly person: representations of happiness and well-being
Magda Guerra, Carlos Laranjeira, Zaída Azeredo
School of Health, Jean Piaget Institute, Research in Education and Community Intervention, 3515-776 Viseu, Portugal
Correspondence: Magda Guerra (magdasantosguerra@gmail.com)
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Background
Population aging in developed and developing countries is an unequivocal reality and poses multiple challenges to their communities and political entities. The societies aim at prolonging the lives of their citizens but also at an improvement of their quality of life; however, the constraints of the elderly population are diverse and it is sometimes necessary to institutionalize them. The elderly persons will have to become familiar with a set of new situations such as a new space, routines and unknown people with which they will share their life. The often-neglected happiness representations associated with these institutions may not be appropriate to reality, because of the changes that have taken place in social policy in recent times.

Objective
We sought to know which representations the institutionalized elders have about their happiness and well-being.

Methods
The sample consisted of 13 elderly people institutionalized in a Nursing Home of Viseu, aged between 77 and 94, with 4 to 12 years of institutionalization, an option for some, due to their own volition; while for others, due to decision of another (children/nephews). It is a qualitative study, using the semi-structured interview. The results were analysed according to content analysis, with a priori categorization.

Results
Happiness for most of the elderly depends on a number of factors, such as being healthy, being well with oneself, being cherished at home, living with others, escaping from loneliness, not starving oneself, being loved and loving, possessing money for oneself and for others and fun. Most elderly people have confirmed that they feel good about themselves, yet two elderly people do not feel well because of sadness and illness. Their memories of the past relate to marriage, family constitution, strength to work and conviviality with friends; whereas, in the present, relate to happiness, a sense of general well-being, not being alone and living with other institutionalized elders.

Keywords
Elderly, Institutionalization, Happiness, Well-being.

P142
Prevention of ventilator associated pneumonia- evidence in oral care
Ana Sousa1,2,3, Cândida Ferro4
1Universidade Católica Portuguesa, 4169-005 Porto, Portugal; 2Centro Hospitalar S. João, 4200-319 Porto, Portugal; 3Escola Superior de Enfermagem do Porto, 4200-072 Porto, Portugal; 4Escola Superior de Saúde, Instituto Politécnico de Setúbal, 2914-503 Setúbal, Portugal
Correspondence: Ana Sousa (sabrinasonousa72@hotmail.com)
BMC Health Services Research 2018, 18(Suppl 2):P142

Background
Ventilator-associated pneumonia (VAP) is the most important nosocomial infection in intensive care units (ICUs), with an estimated incidence rate of 50% and the major cause of mortality and morbidity in ICUs [1,2]. Inadequate oral care develops an important role in this setting allowing various organisms to flourish in oral cavity and cause
infections [1]. Many VAP prevention guidelines include oral care, but they don’t specify its demandings.

Objective
The aim of this study is to describe evidence-based VAP prevention oral care in ICU, in terms of products, frequency and technique.

Methods
Integrative review. Research was conducted on B-on, PUBMED, and RCAAP between 24 and 28 December 2015, including guidelines and original articles from the last 5 years. We found 256 documents and after analysing their abstract and methodological quality, nine documents were selected. Data were compiled in a chart in terms of grade of evidence, acceptance and applicability.

Results
We found inconsistent results regarding the use of an antiseptic solution in oral care, though there were meta-analysis which indicated the benefit of chlorhexidine mostly in cardio-thoracic surgical patients [2-4]. We also found evidence that tooth brushing reduces oral bacterial colonization and may reduce VAP when used with chlorhexidine [5,6]. There is no consensus regarding the adequate concentration of chlorhexidine. Some studies, thought, find an association with the use of chlorhexidine 2% and the incidence of Acute Respiratory Distress Syndrome [7]. Because of this potential risk, we do not recommend the use of this type of concentration, as more randomized controlled trials are needed. We found evidence in VAP prevention oral care comprising suctioning, tooth and gums wash and rising with 15 mL chlorhexidine 0.12%. This procedure should be performed at least 2 times a day. Secretions removal and moisturization should occur between 2 to 4 times a day [1-9].

Conclusions
This review allowed us to describe the adequate oral care in ICUs in order to potentially reduce VAP. As limitation of this study, we can find the lack of high grade of evidence concerning most recommendations. More randomized controlled trials are needed to support the impact of each intervention separately.

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6. Munro, C.L., Grap, M.J., Jones, D.J., McClish, D.K., & Sessler, C.N. 2013;8:Cd008367
Epidemiological and clinical characterization of men who age with HIV/AIDS in Teresina-PI, Brazil
Keila MGS Fortes1, Maria LS Fortes1, João GO Freitas1, Lucas S Terto1
1Municipal Health Foundation, 64002-595 Piauí, Brazil; 2University of Piauí, 64049-550 Piauí, Brazil; 3University Center UniNovafapi, 64075-505 Piauí, Brazil
Correspondence: Lucas S Terto (lerto_7@hotmail.com)
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Background
AIDS is not a “young-only disease” as many older people still evaluate [1]. People with a more advanced age range are starting to appear in the settings of those living with HIV/AIDS [2]. Many causes are attributed: sociocultural changes, especially in sexual- ity; resistance in using condoms; healthcare innovations; access to antiretroviral therapy and other innovations in clinical areas [3]. Among men aged 60 years and over, in the last decade, there has been an increase in the rate of detection [4], which raises the need for public policies aimed at this reality.

Objective
To investigate epidemiological and clinical characteristics of men housed in a shelter for people living with HIV/AIDS.

Methods
Descriptive study of epidemiological and clinical information on people living with HIV/AIDS, housed in a shelter in Teresina-PI, Brazil. Data were collected from 28 selected records, with the following criteria: male, aged 50 years or older. The following variables were considered: age group, educational level, place of residence, time of antiretroviral therapy and clinical manifestations. The data were typed in an Excel 2007 spreadsheet, analysed through percentage differences and discussed, with reference to documents and also articles in which there was content about the proposed theme.

Results
Regarding the age of the group, ages were between 50 and 64 years old, with predominance of individuals aged from 50 to 60 years old. The majority of the elderly presented a low educational level (79.75%), coming from cities with less than 50,000 inhabitants of other states of Brazil (53.57%), who seek Teresina for treatment and follow-up of their health, shelter to receive food, nursing, social and spiritual assistance and, in some cases, family reintegration. Most used antiretroviral drugs since 10 to 20 years ago, with 7.15% using it for more than 30 years. The clinical manifestations detected were: Lung Cancer, Hepatitis B and C, depression, dermatitis, tuberculosis, neuropathy and leishmaniasis.

Conclusions
This study draws attention to the increase in the detection of HIV in men aged 50 years and over, especially those aged 60 years or older, inhabitants of cities of low demographic density in Brazil, with several clinical manifestations, low educational level, which makes difficult the access to preventive information on sexual health, and under the use of antiretrovirals, from more than ten years ago. The study points towards the need for more research on HIV infection among the elderly, to help to implement more effective public policies for this group.

References

Keywords
Old men, AIDS, Health care.

Assessing digital contents for health promotion and obesity prevention in adolescence
Rita Luz1, Pedro Sousa2, Roberta Frontini2, Andreia Silva1, Biana Manual1, Cláudia Ramos1, Mônica Ruivo1, Rüben Abreu1, Tiago Pozzo1, Ana E Sardo1, Francisco Rodrigues1, Luís Fernandes1
1School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
Correspondence: Rita Luz (ritalluz@gmail.com)
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Background
The TeenPower project is an e-Health multidisciplinary program to promote healthy behaviours and prevent obesity in adolescents. In this study we focus in two of the components present in the platform: stress management and interpersonal relationships. It is important to focus on stress while designing prevention programs for adolescents, given that literature has associated higher levels of stress with obesity in youth. Moreover, interpersonal relationships were also found to influence obesity-related behaviours. Online sessions were specifically created to address those issues on the mobile app. This digital content (videos and posters) should not only be appealing for the adolescent but also scientifically valid and correct.

Objective
The main aim of this study was to assess the scientific quality and adequacy of posters and videos created for the TeenPower mobile app, regarding stress management and interpersonal relationships.

Methods
Digital resources in video and poster format were created. Contents regarding stress management and interpersonal relationships. Videos were 2 minutes long and posters included infographics and written content with adequate language for adolescents. These resources were developed by students of health, sports and design, in collaboration with health-professionals and researchers. The sample included adolescents with the sociodemographic characteristics of the future users of the mobile app, and health-professionals working in this field. A questionnaire was developed and validated for the purpose, based on the questionnaire create by Junior and colleagues.

Results
Results regarding the concept idea, information, construction of scenes and characters, dialogues, visual and audio style, and quality and relevancy of the information were obtained. Moreover, adolescents answered regarding the attractiveness and adequacy of the content, and health-professionals answered regarding the scientific accuracy of the content information. Both samples suggested content improvements.

Conclusions
The digital content of the mobile app regarding stress management and interpersonal relationships is adequate and appealing for both adolescents and health-professionals. The assessment of digital content is crucial to understand the acceptability of the contents for future users. Digital contents and online sessions are extremely important, given that adolescents use new technologies on a daily basis. Furthermore, it is important to note that digital contents may have the potential to enhance the adherence to programs, promoting healthy behaviours and preventing obesity.

Acknowledgements
The current abstract is being presented on behalf of the research group of the project TeenPower: e-Empowering teenagers to prevent obesity, co-funded by the FEDER (European Regional Development Fund), under the Portugal 2020 Program, through COMPETE 2020 (Competitiveness and Internationalization Operational Program). We acknowledge the Polytechnic Institutes of Leiria, Santarém and Castelo Branco, the Municipality of Leiria (City Hall), and also other members, institutions and students involved in the project.

Keywords
Adolescents, e-Health, Obesity, Health promotion, Digital contents.
P146
Assessing digital content in the TeenPower project: development and validation of a questionnaire

Roberta Frontini1, Pedro Sousa2,3, Rita Luz2, Ana Duarte1, Beatriz Sineiro2, Maria Moreira2, Romeu Machado2
1Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal

Correspondence: Roberta Frontini (roberta_frontini@hotmail.com)

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Background
The TeenPower project aims to develop a program to promote healthy behaviours and prevent obesity in adolescents. It is a multidisciplinary project with an important e-Health component. Therefore, including valid digital content may help to maximize and optimize the impact of the program. Given that over the years digital resources had a great evolution, there is a growing concern regarding the acceptance of the digital content by the target public. Thus, to assess the digital resources of the TeenPower project, there was the need to develop and validate a questionnaire that could accurately assess the quality and adequacy of the digital content of the TeenPower mobile app.

Objective
Develop and validate a questionnaire to assess the quality and adequacy of the videos and posters of the TeenPower.

Methods
Two scales were developed based on the questionnaire created by Junior and colleagues [1]: one for adolescents (12-16 years old) and one for health-professionals. The questionnaire for adolescents comprised 18 items answered on a 5-point Likert scale and 2 open questions (to assess the video content); as well as 11 items answered on a 5-point Likert scale and 2 open questions (to assess the poster content). The questionnaire for health-professionals comprised 17 items answered on a 5-point Likert and 2 open questions (to assess the video content); as well as 11 items answered on a 5-point Likert scale and 2 open questions (to assess the poster content). The sample included adolescents with the sociodemographic characteristics of the future users of the mobile app, and specialized health-professionals. Exploratory factor analyses and analysis of internal consistency through Cronbach’s alpha were performed.

Results
Data regarding the concept idea, the construction of scenes and characters, the dialogues, visual and audio style and the quality and relevance of the information was obtained. Data regarding the acceptance and comprehension of the content and digital form of the app was obtained from adolescents. The quality and rigor of the scientific information was validated by health-professionals.

Conclusions
The questionnaire presented good psychometric qualities with adequate values for internal consistency and factorial analysis. Given that nowadays there is a vast offer of digital content related to health, there is a concern to use not only appealing content for future users, but also valid and scientifically correct information. This questionnaire may be an important tool to understand the acceptability and quality of the scientific content of the videos and posters.

Acknowledgements
The current abstract is being presented on behalf of the research group of the project TeenPower: e-Empowering teenagers to prevent obesity, co-funded by the FEDER (European Regional Development Fund), under the Portugal 2020 Program, through COMPETE 2020 (Competitiveness and Internationalization Operational Program). We acknowledge the Polytechnic Institutes of Leiria, Santarém and Castelo Branco, the Municipality of Leiria (City Hall), and also other members, institutions and students involved in the project.

Keywords
Adolescents, e-Health, Validation, Questionnaire, Digital content.

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P147
Implementation process of “Engaging Clients Who Use Substances” guideline in a nursing school curriculum

Olga Valentim1, Maria José Nogueira2, Luis Sousa3, Vanessa Antunes1, Sandy Severino4,5, António Ferreira4, Luís Gens4, Luís Godinho5
1School of Health Sciences, Atlântica University, 2730-036 Barcarena, Portugal; 2Hospital Center Lisbon Central, Curry Cabral Hospital, 1050-099 Lisbon, Portugal; 3Health Center Groupings Loures-Odivelas, Regional Health Administration Lisboa e Vale do Tejo, 2685-101 Sacavém, Portugal; 4Hospital Order of São João de Deus, Telhado Health House, 1600-871 Lisboa, Portugal; 5Psychiatry Department, Garcia de Orta Hospital, 2805-267 Almada, Portugal

Correspondence: Olga Valentim (omvvalentim@gmail.com)

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Background
Nursing research has led to knowledge which has contributed to improving health care and to reduce costs. The implantation of guidelines ensures the transfer of the best evidence for clinical practice [1]. Substance-related problems can occur at any age, but usually begin in adolescence [2]. The Guideline Engaging Clients Who Use Substances developed by the Registered Nurses’ Association of Ontario (RNAO), provides evidence-based recommendations related to the assessment and interventions for people over 11 years of age, who use substances, may be at risk of, or have a substance use disorder [3].

Objective
To present the experience of the guideline implementation process of the RNAO’s Engaging Clients Who Use Substances, in the curriculum of the nursing degree (CLE) of the Atlantic Health School (ESSATLA).

Methods
Implementation procedures endorsed by the RNAO were followed, involving teachers, students and nurses from several clinical practice contexts. First, an analysis and reflection were made considering ESSATLA’s CLE curriculum, Unit Sheets and the Engaging Clients Who Use Substances guideline recommendations. Afterwards, a guideline implementation plan was designed to fit the CLE, based on structure, process and outcome indicators. Teachers and clinical tutor train was performed and some guideline topics were included in several units: establishing therapeutic relationships [4] and person- and family-centred care [5].

Results
To date, guideline implementation process results include several outcomes: seminar meetings held with all stakeholders involved in the guideline’s implementation process; a partnership training project - Partnership training seminars; a workshop scheduling plan; Portuguese translation of the “Engaging Clients Who Use Substances” process (teacher and nursing expert stakeholder collaboration); didactic materials to support content implementation in the nursing curriculum; student evaluation tools and instruments; three students included the topic of substance use in their end-of-course monograph project; some students in the clinical practice of the elderly did an in-service training session on this subject.

Conclusions
The implementation of this guideline in the CLE curriculum has empowered students to become more confident and competent to care for substance abusers, namely regarding screening, the assessment process and intervention in substance use disorders. It also
meets the expectations of the stakeholders involved, empowering their performance based on scientific evidence.

References

Keywords
Substance-Related Disorders, Evidence-Based Nursing, Nursing Education.

P148
An overview of vitamin B in food supplements
Isabel M Costa, Alexandre Figueiredo, Deolinda Auxtero
Instituto Universitário Egas Moniz, 2829-511 Caparica, Portugal
Correspondence: Isabel M Costa (imargaridac@gmail.com)
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Background
Over last decade, sales of vitamins have had a significant increase worldwide. Besides the growing of self-diagnosis and self-medication by consumers, these products are also often consumed without any control or medical supervision, during extended periods of time, due to the general misperception that natural indicates harmless. Despite vitamin B6 is a co-factor for several enzymatic reactions, its beneficial effects, excess intake of vitamin is not innocuous. Although the daily doses present in FS are reviewed ensuring for the safety of these products, meeting the expectations of the stakeholders involved, empowering their performance based on scientific evidence.

Results
Results showed FS label doses above RDA: 70.0% (vitB1), 75.0% (vitB2), 67.4% (vitB3), 51.1%, (vitB5), 74.3% (vit B6), 45.7% (vitB7) and 60.3% (vit B12). Thirty-three (33) FS contained all the studied VitB, six (vitB2), 67.4% (vitB3), 51.1%, (vitB5), 74.3% (vit B6), 45.7% (vitB7) and

Conclusions
The majority of FS presented vitB far above defined RDA. Although reports of toxic events due to vitamins are scarce, it is crucial that the daily doses present in FS are reviewed ensuring for the safety of these products. Authors also consider that FS should be under the same quality control of pharmaceuticals, safeguarding the health of the consumers.

Keywords
Vitamin B, Food Supplements, Recommended Daily Allowances.

P149
Is the International Physical Activity Questionnaire (IPAQ-sf) valid to assess physical activity in patients with COPD? Comparison with accelerometer data
Joana Cruz 1,2,3, Cristina Jácme 3,4, Alda Marques 3,5
1Center for Innovative Care and Health Technology, Politechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2School of Health Sciences, Politechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3Respiratory Research and Rehabilitation Laboratory, School of Health Sciences, University of Aveiro, 3810-193 Aveiro, Portugal; 4Center for Health Technologies and Information Systems Research, Faculty of Medicine, University of Porto, 4200-319 Porto, Portugal; 5Institute of Biomedicine, University of Aveiro, 3810-193 Aveiro, Portugal
Correspondence: Joana Cruz (joana.cruz@ipleiria.pt)
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Background
The International Physical Activity Questionnaire short form (IPAQ-sf) is primarily designed for physical activity (PA) surveillance, presenting good psychometric properties in people with an age range of 15-69 years. However, studies conducted in older people have shown conflicting results, suggesting that it may not be adequate for this population. Therefore, the use of the IPAQ-sf for the assessment of PA in patients with chronic conditions such as chronic obstructive pulmonary disease (COPD), in which patients are frequently older, remains unclear.

Objective
To preliminary evaluate the validity and test-retest reliability of the IPAQ-sf in patients with COPD.

Methods
This exploratory cross-sectional study included 10 patients with COPD (71.6 ± 7.3 years old, 7 males, FEV1=77.2 ± 20.7% predicted). Patients completed the IPAQ-sf on two occasions separated by 1 week and wore an accelerometer (Actigraph GT3X+) for 7 consecutive days. The following statistical analyses were conducted: 1) Pearson’s correlation coefficient (r) to assess correlations between the results obtained from the IPAQ-sf (PA in METs-min/week; sitting time in min/day) and the accelerometer (PA: total moderate-to-vigorous physical activity (MVPA) per week and recommended MVPA per week – i.e., MVPA conducted in bouts of at least 10-min as internationally recommended [1]; sedentary time in min/day); 2) percentage of agreement (%agreement) and Cohen’s kappa to assess the agreement between categorical scores obtained from the two measures (i.e., ‘sufficiently’ and ‘insufficiently’ active patients); 3) Intraclass Correlation Coefficient (ICC2,1) and 95% limits of agreement (LoA) to assess test-retest reliability and agreement.

Results
Significant correlations were found between IPAQ-sf METs-min/week and total MVPA (r=0.729, p=0.017), but not between METs-min/week and recommended MVPA (r=0.346, p=0.327) or between IPAQ-sf sitting time and accelerometer-based sedentary time (r=0.383, p=0.308). Agreement between the IPAQ-sf and accelerometer-based data, in identifying ‘sufficiently’ and ‘insufficiently’ active patients, was low (total MVPA: kappa=-0.538, %agreement=20%; recommended MVPA: kappa=-0.087, %agreement=50%). Test-retest reliability of the IPAQ-sf was poor to moderate (PA: ICC2,1=0.439 [-0.267→-0.838]; sedentary time: ICC2,1=0.511 [-0.178→0.864]) and the agreement was low (PA: LoA -1036→4548 METs-min/week; sedentary time: LoA -194→148 min/day).

Conclusions
Findings suggest that the IPAQ-sf has limited validity and reliability in the assessment of PA in patients with COPD. Further research with a larger sample is needed to support these findings.

References
Background
Physical activity (PA) is recognised as an important health enhancing behaviour and should be routinely assessed in clinical practice to identify insufficiently active people. Activity monitors, such as accelerometers, provide objective assessment of free-living PA being the preferred assessment method in research settings. However, they are too expensive to be used in resource-constrained clinical settings. Several PA questionnaires have already been validated to the European Portuguese but some of them take too long to complete, hence unsuitable for use in clinical practice. Shorter PA assessment tools are, therefore, needed.

Objective
To explore the relationship between the Portuguese version of a short PA questionnaire, the Brief physical activity assessment tool (Brief-PA tool), and the International Physical Activity Questionnaire short form (IPAQ-sf), which is a valid and reliable PA assessment tool already tested in the Portuguese population. A secondary aim was to explore the test-retest reliability of the Brief-PA tool.

Methods
The Brief-PA tool [1] consists of 2 questions which assess the frequency and duration of moderate and vigorous PA undertaken in a ‘usual’ week. The total score is obtained by summing the results of the two questions (range 0-8). People with a score ≥ 4 are considered ‘sufficiently active’. Since the tool is not available in Portuguese, a linguistic adaptation was conducted using the forward- and back-translation method. Then, 86 healthy volunteers (49.5±18.1 years, age range 20-69; 53 female) completed the Brief-PA tool and the IPAQ-sf. A sub-sample (n=56, 43.1±18.1 years, 37 female) completed the Brief-PA tool one week later. Spearman’s rank correlation coefficient (p) was used to assess correlations between the Brief-PA total score with IPAQ-sf results (MET-min/week). Percentage of agreement (%agreement) and Cohen’s kappa were used to assess the agreement between categorical scores obtained from the two measures (i.e., ‘sufficiently’ and ‘insufficiently’ active) and test-retest reliability of the Brief-PA tool.

Results
Significant correlations were found between the Brief-PA tool and the IPAQ-sf (p = 0.721, p < 0.001). The Brief-PA tool identified 34.8% sufficiently active participants while the IPAQ-sf identified 59.3%. Agreement between measures was moderate (%agreement=70.9%, kappa=0.450). Test-retest reliability of the Brief-PA tool was substantial (%agreement=89.3%, kappa=0.755).

Conclusions
The Brief-PA tool seems to be valid and reliable for assessing PA in the Portuguese adult population, although the agreement with the IPAQ-sf was only moderate. Further research assessing the validity of the Brief-PA tool with objective measures is needed.

References

Keywords
Concurrent validity, Daily living, PA questionnaire, Brief physical activity assessment tool.
Background
In Portugal, it is estimated that about 31% of food waste occurs in the last stage of the food production chain and that about 13% of the food served is not consumed [1]. Food waste contributes to an inadequate nutritional intake, since part of the served food is being discarded, therefore its evaluation is important [2].

Objective
To evaluate the nutritional impact of food waste in relation to nutritional requirements in a food unit of the Social Services of the Polytechnic of Leiria.

Methods
Food waste was determined by the aggregate component weighing method, being evaluated at lunch and dinner periods of a randomly chosen day. The data were collected in the cafeteria and snack bar that served the largest number of meals. Only non-fractioned dishes were considered in this analysis. The nutritional impact of food waste was evaluated considering the nutritional requirements of a typical costumer of the food services - an average energy value of 2000 kcal and the percentages corresponding to the two evaluation moments of the day, corresponding to 55% of the Total Energy Value (TEV), 30% to lunch and 25% to dinner [3, 4].

Results
It was produced 288.9 kg of food, being 40.3 kg of plate waste. The average amount of food served per meal was 329 g and an average of 50 g per meal was plate waste. It can be concluded that about 14% of the total food produced was discarded as plate waste, which represents around 123 meals. When evaluating the nutritional impact of food waste, it was observed that the average waste per person was 84 kcal, which represents about 15.3% of the energy value of meals. It was also observed that 2.4 g of lipids, 5.6 g of protein and 9.6 g of carbohydrates were wasted, per meal, which is the equivalent to about 13.1%, 20.4% and 14.0%, respectively, of the needs of the typical costumer of the food services.

Conclusions
Based on these results, we can observe a food waste impact of about 10% of the nutritional requirements of an individual, being imperative the reinforcement of periodic evaluation of consumption and plate waste in school meals, attending that food waste is a decisive factor in terms of energy and nutritional adequacy [5]. On the other hand, it is still necessary to develop actions to raise the awareness among the student community about the nutritional impact of food waste on the health of the population.

References

Keywords
Prevention, Active Ageing, Fall, Fall Risk, Exercise Programs.
Numerical methodology to support a medical device development
Filipa Carneiro, Lourenço Bastos, Angelo Marques, Rita Marques, Jordana Gonçalves, Andreia Vilela, André Maia, Sara Cortez, Anabela Salgueiro-Oliveira, Pedro Parreira, Bruno Silva

1Innovation in Polymer Engineering, University of Minho, 4800-058 Guimarães, Portugal; 2Muroplás – Indústria de Plásticos, S.A., 4745-334 Trofa, Portugal; 3Health Sciences Research Unit: Nursing, Nursing School of Coimbra, 3046-851 Coimbra, Portugal.

Correspondence: Filipa Carneiro (fcarneiro@piep.pt)
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Background
The use of numerical simulations as part of product development process allows the existence of virtual prototypes that can be tested quickly and cheaply. These computational tools facilitate and improve the design optimization and the materials selection, to match the pre-defined product requirements, during the development process, for use in health contexts [1].

Objective
Development and validation of a numerical methodology to support an innovative syringe, predicting its mechanical and flow behaviour, during the syringe loading and patient administration; as also the injection molding process of its constituent components. This methodology aims to optimize the geometries of the syringe’s components, creating in this way an iterative process for product development based on numerical simulations.

Methods
This numerical methodology was implemented using software for fluid dynamics, mechanical behaviour and injection process, respectively. To study the fluid-structure interaction (FSI), during syringe loading and patient administration of medicines and washing solutions, the fluid dynamics output served as structural simulations input. Material properties were experimentally determined. The FSI numerical models were validated by comparison with experimental tests on a single chamber syringe. Afterwards, the same numerical models were implemented in new innovative syringe concepts. The injection molding processes of these concepts were also numerically evaluated.

Results
Validation of the numerical simulations using a simple case of a single chamber syringe, where the numerical solution is compared with an experimental case. Development and application of an iterative process for product development, based on numerical simulations. Optimization of an innovative product design that fulfils all the specifications and requirements predefined.

Conclusions
This iterative process based on numerical simulations is a powerful tool for product development that allows obtaining fast and accurate results, without the strict need of prototypes. An iterative process can be implemented, consisting on consecutive constructions and evaluations of new concepts, to obtain an optimized solution, which fulfils all the predefined specifications and requirements. The prior validation of the numerical methodology with a reference model, is an extremely important step to guarantee the reliability of the numerical model applicability in the development of medical devices.

Acknowledgments
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References

Keywords
Numerical simulation, Fluid-structure interaction, Injection process, Syringe.
with mental illness should address this relation, providing support and developing their skills to improve the care provided and preventing caregivers’ burnout.

References

Keywords
Family caregivers, Care provided, Mental disorders, Burden.

P156
Levels of physical activity and sedentary behavior in school-time of elementary school children
Mariana Lima1, Ana Soares1, Andreia Santos1, Fernando Martins1,2, Rui Mendes1
1Coimbra Education School, Polytechnic Institute of Coimbra, 3030-329 Coimbra, Portugal; 2Telecommunications Institute, University Beira Interior, 6200-161 Covilhã, Portugal; 3Center for Research on Sport and Physical Activity, University of Coimbra, 3040-248 Coimbra, Portugal
Correspondence: Mariana Lima (asms.mecl@gmail.com)
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Background
Zimmo et al. (2017) [1], concluded that in what concerns the physical activity (PA) of children in elementary schools (ES), only 39% of the children reached the recommended values of moderate (M) and vigorous (V) PA (30 or more daily minutes), and showed that children spend most of their school time involved in sedentary activities (SB).

Objective
The aims of this study were I) the description of PA (light, moderate and vigorous levels) and sedentary behaviours (SB) of ES boys and girls in relation with the time spent in each level of PA; II) to determine the average time children spend on each level of PA during 4 weekdays (9:00 a.m. to 5:30 p.m., Monday to Thursday) and III) to compare the MVPA developed by children during formal physical education sessions, with other weekdays.

Methods
Forty (40) voluntarily children with 7.9 ± 0.6 years (30 girls and 10 boys) were authorized by their parents to participate in the study. PA was assessed using a three-axial accelerometer (ActiGraph® wGT3X-BT) during to 7.5 daily hours of school period. For classifying moderate-to-vigorous physical activity (MVPA) a cut-off point of 818 counts per 5s was used.

Results
The average duration of MVPA was 36.51 ± 13.50 min per day. Only 35% of the participating children reached the recommended school-based MVPA of 30 min or more, per day. Children spent on average 71.74 ± 6.37% of their school time on SB. MVPA of girls were lower (31.9 ± 8.9 min/day) than boys (51.3 ± 16.1 min/day, ES = 1.76, p=0.004). Our results showed that the percentage of MVPA on the day of the physical education lesson (11.4 ± 3.8%) was higher, when compared to other weekdays (7.5 ± 2.6%).

Conclusions
We objectively assessed PA during school hours among elementary school-children. This study found that children spend the majority of their school time in SB and many of them do not perform sufficient time of being physically active at school. The low participation of girls in MVPA and the lesser time spend in MVPA on weekdays without physical education lessons are relevant data to reflect and implement strategies to increase the time of physical activity during school-time, which corresponds to one third of the daily life of children.

Acknowledgements
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References

Keywords
Physical activity, Motor development, School-time, Accelerometer, Physical education.

P157
Labor pain relief: sterile water injection vs finger ischemic compression technique on the lumbosacral region
Ana Moulaz (anamoulaz@gmail.com)
Polytechnic Institute of Bragança, 5300-253 Bragança, Portugal
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Background
Nowadays there is an overvaluation about the pain of giving birth. Therefore, Brazil presented 56% of caesareans and Portugal 33.1% in 2016. In order to assist women when giving birth, analgesia has been a strong ally to enable delivery without pain. There are non-pharmacological techniques for pain control in obstetrics. There is, the Sterile Water Injection on the Michaeils Triangle which causes immediate pain relief in the lumbosacral region. Physiologically, sterile water doesn’t act as a local anaesthetic and doesn’t inhibit the fibres that report visceral pain; however, causes a release of the C fibres and A-delta fibres associated with somatic pain. Distilled water stimulates A-delta fibres and subjugates the visceral pain reported by the C fibres, which fails to notify visceral pain, modulating afferent patterns of pain. In this way, it silences the C fibres and releases endorphins. Based on this mechanism, an experimental study has been done applying the finger ischemic compression technique to the same region, in Brazil in 2014, to characterize the technique as a tool to pain control.

Objective
To compare the technique of sterile water injection with the experimental finger ischemic compression in the lumbosacral.

Methods
A Comparative study between those techniques through a systematic review of literature based on the Clinical Practice Guide to Normal Childbirth Care, by the Basque Government, about sterile water injection and the finger ischemic compression technique (Nursing Residency Program in Obstetrics, in Brazil in 2015). This study compares the effect versus time duration of analgesia between them.

Results
The analysis of 292 studies showed that the sterile water injection into the Michaeils triangle decreased lumbar pain during delivery by approximately 60%, and the effect remained for up to 2 hours. In the finger ischemic compression experiment, there was a pain level reduction by 66%, remaining for 4 hours. However, in both cases, patients referred an intense burning during application.

Conclusions
This study contributes to pain control in obstetrics, as the two methods lead to a significant reduction of the pain level. However, finger ischemic compression had a longer duration of analgesia, when compared to sterile water injection. The injection in obstetrics is already recommended as an effective method for pain control and there is a need for further research on the finger ischemic compression experiment, to also consolidate the technique as a method of pain management.

Keywords
Labor pain relief, Obstetrics, Giving birth, Non-pharmacological techniques, Analgesia.
**P158**

Microencapsulation of phytosterols and/or other bioactive ingredients for minimizing cardiovascular risk

Pedro Vieira1, Isabel Andrade2, Rui Cruz2
1Pharmacy Department, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal; 2Complementary Sciences Department, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal

**Correspondence:** Pedro Vieira (pedromdvieira96@gmail.com)

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**Background**

Several bioactive ingredients such as phytosterols, resveratrol, curcumin and catechin have shown efficacy in the prevention of chronic diseases, namely in cardiovascular diseases, one of the leading causes of death in the world. Besides all the potentialities, many of these bioactive ingredients present the disadvantage of instability and sensitivity to environmental factors (e.g. light and oxygen) and are also characterized by low water solubility due to its lipophilicity. Microencapsulation of bioactive compounds emerges as a strategy to improve their stability, avoiding adverse conditions and promoting their bioavailability. It includes a set of several techniques that allows the coating of these ingredients through a protective film, to guarantee its protection and to modulate its release at the target cells. Many techniques of microencapsulation and different materials can be used, the choice depends on the intended application, particle size, the release mechanism and on the physicochemical properties of both active material to be encapsulated and encapsulating agent.

**Objective**

To review the available research in this field of expertise.

**Methods**

A research was conducted using Google Scholar, PubMed and Elsevier databases, in Portuguese, English or Spanish languages over the last 10 years, and using as keywords Microencapsulation; bioactive compounds; phytosterols; cardiovascular risk.

**Results**

The search retrieved 10 studies. The findings demonstrated not only the potential of the compounds in the reduction of cardiovascular risk, through the action on risk factors, but also the increase of their activity due to the increase of their bioavailability, achieved through microencapsulation. The research also revealed a wide range of materials that can be used, while the choice of method must take into account several factors such as its cost and necessary equipment, as well as the quality of the microcapsules formed. The microencapsulation process has a wide range of advantages, namely the ability to increase gastrointestinal absorption of the bioactive compounds encapsulated, and in addition, while the conversion of those compounds into the powder form is enhanced, their stability increases and their handling is facilitated.

**Conclusions**

The use of microencapsulation avoids some undesirable characteristics, proving to be an alternative to increase the bioavailability of the bioactive compounds. Future studies should address the exploration of newer encapsulating methods and materials.

**Key words**

Microencapsulation, Bioactive compounds, Phytosterols, cardiovascular risk.

**P159**

A weighted decision making approach for a new medical device concept selection

Marta Gomes1, Ângelo Marques1, Ricardo Freitas2, Ana Bela Salgueiro-Oliveira3, Pedro Parreira3, Alberto Coelho3, Sara Cortez4, Bruno Silva4, Filipa Carneiro1
1Innovation in Polymer Engineering, University of Minho, 4800-058 Guimarães, Portugal; 2Health Sciences Research Unit: Nursing, Nursing School of Coimbra, 3046-851 Coimbra, Portugal; 3Muroplás – Indústria de Plásticos, S.A., 4745-334 Trofa, Portugal

**Correspondence:** Filipa Carneiro (f.carneiro@piep.pt)

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**Background**

The development of an innovative syringe results, at an early stage, in several preliminary concepts that should be compared and analysed to select the most promising one. Making the selection decision is a very important task that should be structured and well-founded. Decision making methods can be applied to help in the selection process, leading to more informed and better decisions.

**Objective**

To apply a weighted decision matrix, in order to select the most promising concept for an innovative syringe.

**Methods**

To select the most suitable concept for the device to be developed, it is mandatory to define the specifications that it must obey, considering the functional requirements of the product and the requirements for the production process. Not all the specifications have the same importance in concept selection, and so this was analysed through a weighted decision matrix. Based on the identified specifications, it was defined the corresponding criteria, which must be evaluated and weighted regarding their relative importance to each of the other criteria. These weights were summed for each criterion. As experts from different areas were involved, it was decided that each expert group should weigh, considering their experience. As expected, different matrices were obtained and results were managed to achieve only one weight matrix which included the opinion of all the groups. A final weighted matrix with all the criteria and its weight for concept selection was obtained. Each concept of the syringe was evaluated according to these defined criteria and calculated its weighted sum. It was selected the concept with the highest weighted sum of all the defined criteria.

**Results**

By analysing the proposed weighting table of the specifications, and considering the defined relative weight, it was verified that the most relevant specifications are the cost, the number of operations to be performed and the possibility of error. Based on this, the concept with better weighted performance was selected for further detailed development.

**Conclusions**

A weighted decision matrix has showed to be a very effective tool to assist the development of new products for use in health, particularly in cases where there are many concepts and many criteria of varying importance to be considered.

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**Keywords**

Weighted decision matrix, Medical device, Product design.

**P160**

Vestibular symptoms in sensorineural hearing loss

Maria Araújo1, Luís Ramalho2
1Audiology Department, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal; 2Research Center for Sport and Physical Activity, Faculty of Sport Sciences and Physical Education, University of Coimbra, 3040-256 Coimbra, Portugal

**Correspondence:** Maria Araújo (ines@estescoimbra.pt)

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**Background**

The type of aetiology of hearing loss is directly related with the embryonic and physiological interactions of the anatomical structures of the auditory and vestibular systems. The proximity between both systems can evolve simultaneously auditory and balance, mainly in individuals with peripheral pathologies.

**Objective**

To characterize and evaluate the vestibular symptoms in individuals with bilateral severe and profound hearing loss.
Methods
The information was gathered with resource to two questionnaires: one for anamnesis and the Dizziness Handicap Inventory (DHI). The sample was constituted by 28 adults with severe and profound sensorineural hearing loss, between 19 and 64 years old (15 females and 13 males). 42.9% of the sample had idiopathic audiometry, 10.7% had meningitis and the same percentage with the aetiologie of measles.

Results
Seventy-five percent 75% had tinnitus, being 33% bilateral. Regarding vertigo symptoms, 53.6% reported at least one episode, describing it as a rotatory vertigo (66.7%), with the length of minutes (33.3%) to days (26.7%). Regarding DHI, the functional sub scale is the one that perceives more difficulties when performing daily tasks, as a consequence of vertigo and/or unbalance (5.7 ± 8.5), followed by the physical sub scale (4.8 ± 6.8).

Conclusions
The study has shown that the major part of the sample had already faced symptoms as tinnitus, vertigo and/or unbalance.

Keywords
Hearing Loss, Vestibular symptoms, Tinnitus, Vertigo.

P161
Men’s prenatal experience in the transition to fatherhood
Catarina Silva1, Cristina Martins2, Cândida Pinto3
1Agrupamento de Centros de Saúde do Alto Ave, 4810-503 Guimarães, Portugal; 2Nursing School, University of Minho, 4700-057 Braga, Portugal; 3Nursing School of Porto, 4200-072 Porto, Portugal
Correspondence: Catarina Silva (catsilva@gmail.com)

Background
Pregnancy is a demanding period in terms of psychological reorganization in the transition to fatherhood [1,2]. The involvement of men in this period is associated with their own psychological well-being as well as the whole household [3]. This is a transition with implications for the couple, for the father/child relationship, and child development [4]. Contemporary fatherhood emphasizes the involvement of men and greater affective contact with their children, in addition to their traditional role as a financial provider [5].

Objective
This study sought to understand the experiences of men as they transition to fatherhood during the prenatal period, aiming to contribute to a complete assistance to the family and improving the health gains of the family.

Methods
Qualitative research paradigm. Exploratory, descriptive, cross-sectional and retrospective study, with the participation of 10 men experiencing, for the first time, the pregnancy of their partners, in the last trimester, in a common-law marriage and with gestation without maternal-foetal pathology. Data collection was performed using the semi-structured interview. The data was analysed with the content analysis technique, with semantic categorization and an inductive approach.

Results
Through content analysis three themes emerged, “experiencing transition”, “development of father identity” and “(de)construct bridges to transition.” The results revealed a male experience of pregnancy characterized by an enormous psychic and emotional depth. Men accept and try to actively engage in the pregnancy process and experience a panoply of positive and negative feelings and emotions, sometimes ambivalent. The prenatal period triggers the development of paternal identity. During this process, expectant fathers revaluate their personal values, reflect on their own fathering experiences and reshape their view of the world and themselves. Despite their proactive role in the fatherhood journey, they find obstacles and not bridges to their transition. The fact that they feel peripheral in prenatal care services makes it more difficult to embrace fatherhood and may compromise overcoming the transition process.

Conclusions
This study provided insight on the complex nature of this developmental-mental transition and showed fragile environments in the approach of the expectant fathers to the prenatal care services. This reality encourages healthcare professionals to think critically about how fatherhood transition can be facilitated by practices which promote smoother transitions and benefit the family as a whole.

References

Keywords
Fathers, Parenting, Pregnancy, Qualitative research.

P162
Diffuse large b-cell lymphoma, which treatment options are available?
Mariana Carvalho1, Fernando Mendes1,2,3,4, Salomé Pires2,4, Ricardo Santos2,5, Nicole Eicher6, Ricardo Teixeiro6,4, Rui Cruz1
1Pharmacy Department, Coimbra Health School, Polytechnic Institute of Coimbra, 3046-854 Coimbra, Portugal; 2Biophysics Unit, Faculty of Medicine of University of Coimbra, 3004-504 Coimbra, Portugal; 3Department Biomedical Laboratory Sciences, Coimbra Health School, Polytechnic Institute of Coimbra, Coimbra Health School, 3046-854 Coimbra, Portugal; 4Center of Investigation in Environment- Genetics and Oncobiology, Faculty of Medicine of University of Coimbra, 3004-504 Coimbra, Portugal; 5Immunology Institute, Faculty of Medicine, University of Coimbra, 3004-504 Coimbra, Portugal; 6Applied Molecular Biology and Clinical University of Hematology, Faculty of Medicine of University of Coimbra, 3004-504 Coimbra, Portugal; 7Faculty of Sciences and Technologies, University of Coimbra, 3004-504 Coimbra, Portugal; 8Biomedical Laboratory Sciences Department, University of Applied Sciences, 6711 Gratz, Austria
Correspondence: Fernando Mendes (fjmendes@estescoimbra.pt)

Background
Diffuse large B-cell lymphoma (DLBCL) is one of the most common and aggressive subtypes of non-Hodgkin’s lymphoma (NHL). The current therapy for DLBCL is the combination of rituximab, cyclophosphamide, doxorubicin, vincristine and prednisone (R-CHOP). R-CHOP-14 and R-CHOP-21 are two subtypes of R-CHOP, which differ in their treatment, like CHOP-14 that has better results within high dosage in advanced stages, while CHOP-21 has better efficiency and better overall survival in elderly patients. These treatments have increased the survival of patients, though about 40% of patients there is still a failure rate of treatment. New approaches for relapsed DLBCL are outlined here, for example the understanding of the new drugs role, individualized treatments and dosage regimes.

Objective
To review the treatments available for DLBCL and all the developments of novel treatments, particularly in DLBCL recurrence variants of treatment with R-CHOP and in patients over 80 years.

Methods
A research was conducted using Google Scholar and PubMed databases, in English languages over the last 5 years, and using as
Keywords: Diffuse large B-cell lymphoma (DLBCL) treatment; rituximab, cyclphosphamide, doxorubicin hydrochloride, vincristine sulphate, prednisone (R-CHOP); cyclphosphamide, doxorubicin hydrochloride, vincristine sulphate, prednisone (CHOP).

Results
The treatment of this pathology has advanced over time starting with CHOP and later incorporating rituximab with lower relapse and upturn survival rates. Currently, about 80% to 90% of patients in early stage of DLBCL remain free of the disease after treatment with R-CHOP and radiotherapy consolidation. Concerning elderly patients (> 80 years), the addition of rituximab, namely, a reduced dose R-CHOP provides a good compromise between toxicity and the efficiency of overall survival. The survival of patients with DLBCL with more than 66 years has improved substantially since the introduction of rituximab. However, finding the optimal dose for older patients without associated toxicity is an important focus for further research.

Conclusions
The DLBCL is a heterogeneous disease, both clinically and biologically. Although, DLBCL therapy results have improved significantly over the past decades with the introduction of new specific therapeutic antitumor strategies.

Keywords
Diffuse large B-cell lymphoma, Rituximab, Cyclophosphamide, Doxorubicin, Vincristine, Novel treatments.

P163
Mistreatment to elderly in family context
Maria FP Ribeiro (fatima.ribeiro@kpsn.cespu.pt)
School of Health of Vale do Sousa, North Polytechnic Institute of Health, 4760-409 Vila Nova de Famalicão, Portugal

Background
The evidence about the increasing number of elderly people who, in their everyday lives, are abused and the implications that these events have on the practice of health professionals, plus the need for new «powers» bear alone the importance of the subject of this study. This issue of great sensitivity imposes a need for new «powers» bear alone the importance of the need of being addressed.

Conclusions
The analysis made allowed us to sort indicators of abuse, by type of abuse. The results of this study suggest the emergence and necessity of exploring of the opinions of the participants [4][5]. The focus group involved a literature review, study of the legal standards and conduction of informal interviews to field experts, with the aim of producing a list of topics to assess the level of implementation of the legal norms. A focus group method was used to encourage participants to exchange experiences and perspectives. These interactions allowed the collection of more detailed information and an in-depth exploration of the opinions of the participants [4][5]. The focus group also served as a pre-test to the questionnaire. A convenience sample of four acute services of Portuguese hospitals was selected. The questionnaire involved in the hospitals after receiving the accordance of the Administration Board and Ethical Commission of the institutions involved. Participation in the study was voluntary and ranged all the health professionals of the medical and surgery services.

Results
The results suggest that, although aware of the legal norms, when we control for differences between groups, we find differences between health professional groups. Health professionals recognize and value the existence of training, mainly under the responsibility of the Health Institutions, but do not consider it effective.

Conclusions
This research highlights the importance of spreading knowledge and training in healthcare organizations, notably through the identification of the need for new approaches of training as well as for new training areas.

References

Keywords
Abuse, Elderly, Mistreatment, Prevention.

P164
Guidelines and training a role to play for learning health organizations? The HAIs example
Sandra Oliveira1,2, Sofia Ferreirinha1, Carla Cordirio3, António Lopes4
1Polytechnic Institute of Santarém, 2001-902 Santarém, Portugal; 2Center for Health Studies and Research, University of Coimbra, 3004-504 Coimbra, Portugal, 3District Hospital of Santarém, 2005-177 Santarém, Portugal; 4Hospital Center of the Medio Tejo, 2304-909 Tomar, Portugal

Background
International projections estimate that, in 2050, 390,000 people will die annually in Europe, as a direct consequence of Healthcare Associated Infections (HAIs) [1]. In Portugal, we estimate that 5 in 100 patients could have acquired HAIs during hospitalization [2]. Research based on practice guidelines was published, and despite evidence that good practice strategies are sufficient to reduce the rate of HAIs, hospitals struggle to comply [3]. Investigation of organizational solutions that may contribute to reduce the rate of HAIs is much needed.

Objective
This exploratory study has the following objectives: (1) to identify if the legal standards are known by health professionals of acute services of Portuguese hospitals, detect training actions or courses as well as the most common subjects taught in formal training actions; (2) to recognize the strategies implemented in the hospitals; (3) to analyse whether there are differences between knowledge and implementation of practices in hospitals; (4) to study the suggestions made by the health professionals.

Methods
Through a quantitative and qualitative approach, using quantitative data analysis and content analysis procedures, this study explores the different perspectives given by the health professionals. The design of the study involved a literature review, study of the legal standards and conduction of informal interviews to field experts, with the aim of producing a list of topics to assess the level of implementation of the legal norms. A focus group method was used to encourage participants to exchange experiences and perspectives. These interactions allowed the collection of more detailed information and an in-depth exploration of the opinions of the participants [4][5]. The focus group also served as a pre-test to the questionnaire. A convenience sample of four acute services of Portuguese Hospitals was selected. The questionnaire was distributed in the hospitals after receiving the accordance of the Administration Board and Ethical Commission of the institutions involved. Participation in the study was voluntary and ranged all the health professionals of the medical and surgery services.

Results
The results suggest that, although aware of the legal norms, when we control for differences between groups, we find differences between health professional groups. Health professionals recognize and value the existence of training, mainly under the responsibility of the Health Institutions, but do not consider it effective.

Conclusions
This research highlights the importance of spreading knowledge and training in healthcare organizations, notably through the identification of the need for new approaches of training as well as for new training areas.

References


Keywords
Guide lines, HAIs, Training and Health Organizations.

P165
Barriers, obstacle, difficulties or challenges in development of health partnerships in community intervention projects: a systematic review
Odete Alves1, Paula C Santos2,3, Lidia Fernandes4, Paulo Moreira5,6
1Abel Salazar Institute of Biomedical Sciences (ICBAS), University of Porto, 4050-313 Porto, Portugal; 2Physical Therapy Department, Health School, Polytechnic Institute of Porto, 4200-465 Porto, Portugal; 3Research Center in Physical Activity, Health and Leisure, Faculty of Sport, University of Porto, 4200-450 Porto, Portugal; 4School of Health, Polytechnic Institute of Viana do Castelo, 4900-314 Viana do Castelo, Portugal; 5Center of Administration and Public Policies of the University of Lisbon, 1300-663 Lisbon, Portugal; 6University Atlântica, 2730-036 Oeiras, Portugal
Correspondence: Odete Alves (odetemaalves@hotmail.com)
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Background
Engaging communities in authentic partnerships is increasingly accepted as best practice in community intervention projects, despite the many barriers or challenges to doing so.

Objective
The purpose of this study is to identify barriers, obstacles, difficulties or challenges in development of health partnerships in community intervention projects of some countries.

Methods
We conducted a systematic review using the following data sources: PubMed, B-on, Medline and EBSCOHost. We searched articles from September 2006 through January 2016. A standard form was used to extract data using the key words in the search: Health Partnerships AND Community Health AND Primary Health Care. The articles were selected according to inclusion and exclusion criteria. In the end, we grouped these results based on the six categories used by the Wilder Research Centre: Environment; Membership; Process and structure; Purpose; Communication; Resources, which includes leadership and power.

Results
From the research conducted, 844 articles emerged, which were submitted to the filter, which implied references to at least one of the keywords: Barriers OR Obstacle OR Difficulties OR Challenges. According to the inclusion criteria, a total of fifty-six articles was found. Of these articles, forty-four dealt with factors related to Environment, which included factors related to community, geography, culture, religious faith and homophily, and politics. Regarding the characteristics of the members that influence the development of the partnership, the relationship between the partners is key and this was commented in fifty-three articles. Factors relating to the process of collaboration were found in a total of forty-six articles, while factors related to structural elements were mentioned in forty articles. Thirty-one articles identified the factors relating to objectives, vision and mission. Another factor that was highly discussed was communication, appearing in a total of thirty-four articles. Factors relating to resources were given great importance in the literature, appearing in forty-eight articles. In twenty-three articles, the subject of leadership and factors relating to power were mentioned. The literature reviewed highlighted that factors such as relationships, commitment, communication, funding and structure, are key in the long-term sustainability of the partnership. This topic appeared in fifteen articles.

Conclusions
The systematic literature review identified a set of barriers, obstacles, difficulties or challenges for the development of health partnerships in community intervention projects. In each of the categories we present the factors that are related to them and that can positively or negatively influence the development of those collaborations.

Acknowledgements
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Keywords
Barriers, Obstacle, Difficulties, Challenges, Partnerships.

P166
Parental perception of child body image: retrospective analysis of two studies
Graça Aparício1,2, Patrícia Nascimento3, Madalena Cunha1,2, João Duarte1,2
1Escola Superior de Saúde de Viseu, Instituto Politécnico de Viseu, 4900-843 Viseu, Portugal; 2Centro de Estudos em Educação, Tecnologias e Saúde, 3504-510 Viseu, Portugal; 3Centro de Saúde de Seia, 6270-468 Seia, Portugal
Correspondence: Graça Aparício (gaparicio5@hotmail.com)
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Background
Childhood obesity is a major problem in Portugal and studies show that parents are concerned about their children's overweight, but their perception of children’s nutritional status is not always adequate or is even distorted.

Objective
The general objective was to explore the parental perception of their children’s body image in two studies, study A [1] and study B [2].

Methods
Cross-sectional and retrospective study using two samples, from study A (792) and study B (1424) totalizing 2,216 pre-school children, with mean age = 4.51 years old (SD= 0.97), living in the region of Viseu and Dão (study A) and Viseu, Lamego, Vila Real, Évora and Leiria (study B). The original authors performed the children's anthropometric evaluation and the nutritional classification based on NCHS reference (CDC, 2000). A Sociodemographic Characterization Questionnaire for Children and Parents was used and the Parental Perception of Children’s Body Image Assessment [3].

Results
In study A, overweight was 31.3% (including 12.4% obesity) and 2.7% underweight. In study B was 34.3% overweight (17.4% obesity) and 5.5% underweight, with significant differences (Chi-square= 21.355; p= 0.000) and a higher percentage of parents pointed the representative pre-obesity images (27.5%) and obesity (0.6%), compared to study A, where more children in the normal and low-weight group (56.3% and 20.4% respectively) were selected. A significant difference of means from the parental perception of the child's body image was found between studies (UMW = 498564.000, p = 0.000), and a higher percentage of parents pointed the representative pre-obesity images (27.5%) and obesity (0.6%), compared to study B. A closer perception to the higher values of BMI, i.e., parents presented a less distorted perception of their children’s body image, when they have higher BMI values.

Conclusions
The results indicate more accuracy of the parental perception of the children body image and an oncoming to their real nutritional status in the latest study. This may be the first step towards their recognition of their children’s overweight that is critical to prompting family action, and consequently preventing and treating childhood obesity.

Background
Engaging communities in authentic partnerships is increasingly accepted as best practice in community intervention projects, despite the many barriers or challenges to doing so.

Objective
The purpose of this study is to identify barriers, obstacles, difficulties or challenges in development of health partnerships in community intervention projects of some countries.

Methods
We conducted a systematic review using the following data sources: PubMed, B-on, Medline and EBSCOHost. We searched articles from September 2006 through January 2016. A standard form was used to extract data using the key words in the search: Health Partnerships AND Community Health AND Primary Health Care. The articles were selected according to inclusion and exclusion criteria. In the end, we grouped these results based on the six categories used by the Wilder Research Centre: Environment; Membership; Process and structure; Purpose; Communication; Resources, which includes leadership and power.

Results
From the research conducted, 844 articles emerged, which were submitted to the filter, which implied references to at least one of the keywords: Barriers OR Obstacle OR Difficulties OR Challenges. According to the inclusion criteria, a total of fifty-six articles was found. Of these articles, forty-four dealt with factors related to Environment, which included factors related to community, geography, culture, religious faith and homophily, and politics. Regarding the characteristics of the members that influence the development of the partnership, the relationship between the partners is key and this was commented in fifty-three articles. Factors relating to the process of collaboration were found in a total of forty-six articles, while factors related to structural elements were mentioned in forty articles. Thirty-one articles identified the factors relating to objectives, vision and mission. Another factor that was highly discussed was communication, appearing in a total of thirty-four articles. Factors relating to resources were given great importance in the literature, appearing in forty-eight articles. In twenty-three articles, the subject of leadership and factors relating to power were mentioned. The literature reviewed highlighted that factors such as relationships, commitment, communication, funding and structure, are key in the long-term sustainability of the partnership. This topic appeared in fifteen articles.

Conclusions
The systematic literature review identified a set of barriers, obstacles, difficulties or challenges for the development of health partnerships in community intervention projects. In each of the categories we present the factors that are related to them and that can positively or negatively influence the development of those collaborations.

Acknowledgements
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Keywords
Barriers, Obstacle, Difficulties, Challenges, Partnerships.
Informal caregivers of mental health patients: burden and care provided

Daniel Carvalho1, Catarina Tomás2,3, Ana Querido2,3, Marina Cordeiro2,3, João Gomes1
1Santo André Hospital, Hospital Center of Leiria, 2410-197 Leiria, Portugal; 2School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
Correspondence: Daniel Carvalho (dncarvalho@gmail.com)
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Background
Families and informal caregivers play an important role in providing care for mental health patients [1]. Family caregivers of these patients usually are overloaded with caring activities [2], being more vulnerable to psychological disturbance and burden due to the care provided [3].

Objective
To characterize the care provided; access the burden experienced by informal caregivers of mental health patients and identify its determinants.

Methods
Cross-sectional correlational study, with a non-probabilistic sample of 113 Portuguese relatives and caregivers of mental health patients. Data were collect in the first semester of 2015. Caregivers were interviewed about sociodemographics, type of care (wholly compensatory, partially compensatory, supervision), time spent in self-care daily activities and its intensity (0-7) and with the Portuguese version of the Zarit Burden Interview [4]. Ethical procedures, according to Helsinki Declaration, were taken into account.

Results
Caregivers were mainly females (n=80), with a median age of 51 years, married (n=84), with 12 years of education (n=33) and patients-mothers (n=20). These patients had majorly depressive disorders (36.3%). Caregivers cared for their relatives from 0 up to 54 years (Median=3.25; Mean=7.86; SD=10.78). Most of them (42.5%) corresponded to someone who provided care occasionally. Nevertheless, they provided a wholly compensatory care in most areas of patient self-care daily activities (Mean=26.58; SD=31.20). Preparing and providing meals (Mean=3.57; SD=3.29) was the most frequent self-care provided. Intensity of wholly compensatory care provided was higher in female (t=-2.950; p=0.004) and older (r=0.215; p=0.022) relatives, who took full responsibility for care (p<0.001), living with the patient (t=-2.762; p=0.007). Most caregivers revealed no burden (62.8%; Mean=38.31; SD=22.54). Burden was higher in females (t=-2.869; p=0.005), older (r=0.259; p=0.006) and among primary or secondary caregivers (p<0.001). Impact of giving care, interpersonal relations and perceptions of self-efficacy were also higher in older females with lower education relatives, primary caregivers and caregivers that perceive gravity of their relative illness higher.

Conclusions
The caregivers inquired were mainly secondary and provided total care in all areas. The burden presented by those was low, and they provided care especially in preparing meals and organizing and administering medicines. In this sample, care provided and burden were higher in older female caregivers, low educated and with a high perspective of gravity of their relative illness. Intervention among these caregivers is needed, promoting knowledge, improving skills and providing support, which can allow to reduce the psychological consequences of the needed assistance by the relatives.

References

Keywords
Informal caregivers, Mental health, Burden, Family care.
Results
The project strategic impact is situated at two levels. One, evaluated after execution, corresponding to the expected results: tool development for impact measurement of the program and intervention program creation, supported by the web platform. The other, longer in time, that will be evaluated by health gains of the populations in the future.

Conclusions
The project’s relevance and originality support themselves on scientific evidence, reviling the monetarization as an essential component of the promotional health program [3,4], valorising the innovation and sustentation of the action on the results, including more suitable interventions for the young population on a school environment. The scientific and technological knowledge impact generated and disseminated by the project will contribute for regional and national valorisation, on a logic translation of knowledge.

References

Keywords
Health promotion, Empowerment, Health literacy, Young population.

P169 Effects of education on functional health: mobility and musculoskeletal back pain in the elderly
Gustavo Desouzart1,2,3, Cristina Farias3, Sandra Gagulić1,2,3
1Research in Education and Community Intervention, Piaget Institute, 1950-157 Lisbon, Portugal; 2Piaget Institute, 1950-157 Lisbon, Portugal; 3Health School of Viseu, Piaget Institute, 3515-776 Viseu, Portugal

Correspondence: Gustavo Desouzart (gustavodesouzart@gmail.com)
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Background
The bio-psycho-social changes that seniors undergo determine the importance of promoting a better quality of life, simultaneously with the extension of life expectancy. In what concerns this theme, a new concept of aging emerges, “the active aging” [1,2].

Objective
The aim of the study is to evaluate the effects of a functional health education program on the functional capacity of a group of elderly.

Methods
This is an experimental study, with a sample of 20 elderly people aged 67-91 years (mean of 80.70 ± 5.99), who attended day centres and were enrolled in the “Atividade Sénior” Program. This Program was developed by the social responsibility of the Viseu city council and is very important among the community, to promote physical activity in the population. Elders were randomly assigned to Experimental (n=10) and Control (n=10) groups. During this study all individuals maintained the physical activity training of the “Atividade Sénior” Program, where the experimental group had a training with aerobic, flexibility and strength components, associated with stimulation. The exercise program lasted 12 weeks with a frequency of 3 times a week, with each session lasting 30 minutes. The study was pre and post-tested, with the following scales: Timed Up and Go (TUG), to check the functional capacity [3] and the Visual Analog Scale (VAS) to check pain level [4], with the use of body chart for identifying the site of pain. The study was submitted to the International Ethics Committee in accordance with the guidelines of the World Health Organization (WHO).

Results
In the study population, 80% of the elderly indicated some type of back pain. Of these, 50% indicated that the pain is chronic and 81.2% indicated that the main location is low back pain. At the beginning of the study participants had a mean pain according to the VAS of 5.70; the experimental group with a mean pain score of 7.10 and the control group with an average of 4.30. After 12 weeks, the participants presented a reduction in pain level (3.78), the experimental group with a significant reduction to 3.38 (p=0.034), and the control group also with a reduction to 3.70 (p=0.529). Regarding the functionality, according to the TUG, the experimental group obtained the mean initial time of 21.10 ±10.06 and the final time of 16.32 ± 7.80 (p=0.043), compared to the control group (p=0.436).

Conclusions
The implemented program demonstrated that physical exercise in general allows global improvements in the elderly population of day centers, and the specific implementation of a functional mobility physiotherapy program has allowed significant results. Then there is the awakening to this theme.

Acknowledgements
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Keywords
Functional health, Senior activity, Back pain.

P170 The Practice Environment Scale of the Nursing Work Index (PES-NWI): validation to primary health care
Eva Menino1, Maria A Dixe2,3, Clarisse Louro4, Francisco Stefanie5
1Escola Superior de Saúde da Cruz Vermelha Portuguesa, 1300-906 Lisboa, Portugal; 2School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3Center for Innovative Care and Health Technology, Instituto Politécnico de Leiria, 2411-901 Leiria, Portugal; 4Posto Saúde da Junta de Freguesia de Penha de França, 1170-070 Lisbon, Portugal

Correspondence: Eva Menino (eva.guilherme@gmail.com)
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Background
The environment of nurses’ professional practice and the adequacy of resources are structural factors that are related to the results and quality of care. The validated PES scale for the Portuguese population is adequate to evaluate the conditions for nursing practice, and it was validated in Portugal in hospital settings but not in primary health care. This study proposes to make content validation for primary health care and its psychometric validation, having obtained previous authorization of the author for this validation.

Objective
Validation of the Practice Environment Scale of the Nursing Work Index (PES-NWI) for Primary Health Care.
Methods
The original scale was submitted to a panel of 5 experts. We decided to keep items with levels of agreement greater than 75%, after analysing and after making the changes suggested, we submitted the scale to a second round by the same panel of experts. The new version was used to determine its psychometric characteristics and its revalidation.

Results
The PES version adapted for primary health care presents a Cronbach value of 0.905, meaning a very good internal consistency, with reasonable correlation values for each item with the total of the scale (0.315-0.685). In the analysis through the matrix of main components, only factorial loads above 0.30 were considered, so it was necessary to regroup the items by factors, other than the original scale. Considering the KMO value of 0.797, which indicates that there is a good correlation between the variables, and with a Bartlett test (1407.494, p < 0.001), we could infer that the variables are significantly correlated and consequently we can confirm the validity of the adapted scale. Between the original scale and the one obtained, we identified factors that focus on the same areas, but there was a change in the items that make up these factors. These changes are expected and show greater adequacy regarding the differences between primary and hospital health care. There are differences regarding the items that portray the nurse’s functions, which is in line with the evidence that shows that the community context is generally more favourable for nurses to perform autonomous functions.

Conclusions
It is considered essential to use valid instruments to evaluate the characteristics of the nursing practice environment in Primary Health Care, since it is the first “door” to access to health services, with nurses having a central role in this context.

Public Health Nursing, Continuous quality management, Validation studies.

Background
Intubation associated pneumonia (IAP) is the most frequent health care associated infection in Intensive Care Units (ICU), causing in increased length of stay, multiple health and economic costs and antibiotic resistance [1-4]. The impact of this infection motivated this study.

Objective
Elaborate a Clinical Practice Guideline (CPG).

Methods
Using the ADAPTE methodology, we performed the following sequence of steps: Configuration (definition of the study area, objectives and research questions), Adaptation (search for guidelines and other relevant documents, quality selection and assessment of currency, acceptability and applicability and elaboration of recommendations); Finalization (production of the final document, implementation and statistical data collection in terms of feedback by users about its contributions and final result). We evaluated the document regarding its quality through the application of the AGREE II instrument and its clarity, content and applicability through the presentation of the CPG draft and the application of a questionnaire to all its users in three ICUs. These results were processed using the Statistical Package for the Social Sciences system.

Results
After assessment of evidence grade, applicability and acceptability, we included in the CPG eight recommendations: avoid endotracheal intubation; daily sedation assessment and reduction; daily ventilator weaning; change ventilator circuit only when visibly soiled; head of bed elevation of 30-45º; early exercise and patient mobilization; maintenance of endotracheal tube cuff pressure between 20-30 cm H2O; oral hygiene care with chlorhexidine 0.12% or 0.20% [5-9]. Regarding the application of the AGREE II, the CPG obtained a rating of 7 in all domains, which corresponds to a high quality. The questionnaire obtained a total of 82 responses, which corresponds to a rate of 45.6% of the respondents. All of the health care professionals stated that CPG’s objective is clear, relevant and agree with the content and the adequacy of the recommendations. Regarding applicability, 89% of the respondents stated that is applicable.

Conclusions
There is a lack of systematization and adequacy concerning CPG’s elaboration. This methodology allowed us to find the most recent recommendations regarding IAP prevention and adapt to a specific scenario successfully according to quality and user’s evaluation. We can find a limitation of the study in the fact that the evidence supporting some of the recommendations included in the CPG is moderate, and there is a shortage of experimental studies that assess the impact of implementing each individual recommendation. In the next phase.

References
Background

The evaluation scale of drug users Quality of life (QoL) in a substitution program with methadone, was developed with 21 items, two subscales, “family and economic situation” (11 items) and “personal satisfaction” (10 items) [1]. Concerning their reliability, in the validation study for the Portuguese population in 2005 (n=236) was obtained an Alfa of Cronbach of 0.88 and in a recent study in 2011 (n=308) of 0.93 [1].

Objective

To determine a scale factorial structure and its psychometric properties.

Methods

Methodological study. Participants – 180 drug users participated, aging an average of 41 years (SD=7.58 [24-69]), mostly men (73.3%), single (55.6%) and with children (52.8%), from 3 outpatient drugs units. Data analyses - The correlation matrix of the items was evaluated through exploratory and confirmatory factorial analysis. The factorial load as well as the internal consistency estimated the dimensionality.

Results

In the reliability analysis with 21 items was found an Alfa of Cronbach of 0.89, all communalities >0.40, KMO=0.88 (p<0.001) and 58.42% of explained variance by 5 factors. When extracted item 18 (item-total correlation 0.16), all items assumed an item-total correlation > 0.20; alpha increased (α=0.90) and KMO increased to 0.88 maintaining the stability of the Bartlett test; communalities maintained above 0.40; total variance explained by the 5 factors increased to 60.4%, but 5 factors diverged from theoretical matrix and 10 items weighed in more than one factor. Through confirmatory analysis (excluding item 18) forcing for the 2 original scale factors, we verified that 4 items had communalities <0.30. The total variance explained after the spin fell to 43.11% and 4 items weighed in more than one factor. We explored with 3 factors, KMO maintained in 0.88, Bartlett test remained within criteria, total variance explained after de rotation stayed 49.6%. Although this structure presents 3 items weigh in more than one factor, justifies its maintenance by underlying the theoretical model. Alpha is higher to initial (α=0.90). The extraction of any item will weaken scale consistency. The most stable structure was with 3 renamed factors: 1- Personal satisfaction and self-care (8 items) (38.5% explained variance); Social Family situation (8 items) (7.4%); 3- Socio professional and economic situation (4 items) (6.5%). The fidelity of the scale is reinforced by the internal consistency of its subscales; factor 1 α=0.85; factor 2 α=0.79; factor 3 α=0.72 and by the correlation between them (0.51-0.67; p<0.01).

Conclusions

Good internal consistency. Factorial analysis supported by the theoretical matrix. Good discriminant capacity by differences pointed out in some variables.

References


P173

Occupational sedentary lifestyle and overweight among workers of a higher education institution – Coimbra

Sónia Fialho,1 Anabela Martins2, João Almeida3
1Dietetics and Nutrition Department, Coimbra Health School, 3046-854 Coimbra, Portugal; 2Physiotherapy Department, Coimbra Health School, 3046-854 Coimbra, Portugal; 3Environmental Health Department, Coimbra Health School, 3046-854 Coimbra, Portugal
Correspondence: Sónia Fialho (sonia.fialho@estescoimbra.pt)  
BMC Health Services Research 2018, 18(Suppl 2):P173

Background

In the last decades, with the introduction of changes in the work processes and with the innovation inherent to new technologies, there has been an increase of the sedentary labour lifestyle, where the worker remains sitting for long periods of time in a working day. Sedentary behaviour is associated with an increased risk of developing chronic diseases such as obesity, type II diabetes, cardiovascular diseases, and these diseases are the main cause of mortality and morbidity in Portugal.

Objective

This study aims to evaluate the relationship between sedentary work and overweight in teaching and non-teaching workers.

Methods

The Occupational Sitting and Physical Activity Questionnaire (OSPAQ) was applied and then calculated the percentage of the activity for each domain (sitting, standing, walking) by the number of hours worked per day. Data on age, gender and body mass index, between December 2017 and January 2018, were collected from a sample of 58 adult men and women in full-time employment at the time of the study. To study the correlation between the percentage of the occupational sitting by the number of working hours per day and overweight, authors analysed the information with SPSS Statistics.

Results

In the present study, 39 of the individuals were females and 19 males, aged between 31 and 62 years. In the analysis done to the OSPAQ, 44 (75.8%) individuals spend more than 50% of their working day in the sitting position. In relation to the BMI, considering the purpose of the study and according to the classification of the World Health Organization, 32 (55.2%) of the individuals presented a BMI ≥ 25. Pearson correlation revealed that there is no association between the sitting time and the BMI ≥ 25 (p> 0.05).

Conclusions

With this study it was possible to verify that there are individuals with a sedentary lifestyle associated to their work day. Although in this study there is no association between occupational sitting and BMI ≥ 25, despite there are studies that demonstrate a significant association between these two parameters. A further study, including other criteria, is in progress, involving the anthropometric level, such as body fat, waist circumference and physical activity assessments.

References

Background Oral hygiene can become a very difficult task for patients who have suffered a stroke, due to motor and cognitive complications and lack of coordination, which usually accompany the post-stroke period. Many of these patients require support from caregivers to properly hygiene the oral cavity as well as their prostheses.

Objective Characterization of oral health among elderly who have suffered a stroke.

Methods A cross-sectional observational study was carried out in institutionalized elderly individuals aged between 60 and 98 years old. Data collection was carried out in two households in the city of Viseu, Portugal: Fundação Dona Mariana Seixas and Viscondessa House of São Caetano. Due to health limitations of the study participants, in terms of speech and cognitive problems, the final sample consisted of 30 participants. Data collection was achieved through the application of a questionnaire.

Results Of the final sample, 20 elders had at least one stroke episode, representing 67% of the sample. Of these 20 elders, 5 reported having had cognitive or speech sequelae, while the remaining 15 reported that the main sequel was motor dysfunction. Of a total of 30 institutionalized elderly, 19 had total absence of dental pieces, corresponding to 63% of the sample. However, the remaining 37% reported multiple dental losses due mainly to dental caries and periodontal problems. These problems may be associated with deficient oral hygiene of the participants, where 18 affirm that they perform dental or denture brushing only once a day, while 40% said they did not take care of their own oral hygiene.

Conclusions Within the limitations of this study, it is possible to conclude that stroke is a constant among the Portuguese population and that patients who have suffered from stroke have a lower oral hygiene.

Keywords Oral hygiene, Elderly, Oral health, Dysfunction.

P175

The daily life of people with human immunodeficiency virus in an island space: what trends?
Gilbertha Sousa1, Maria A Lopes2, Vitória Mourão3
1Universidade da Madeira, 9000-034 Funchal, Madeira, Portugal; 2Escola Superior de Enfermagem Lisboa, 1600-190 Lisboa, Portugal; 3Universidade de Lisboa, 1649-004 Lisboa, Portugal

Background Human immunodeficiency virus/acquired immunodeficiency virus (HIV/AIDS) infection continues to haunt the lives of millions of people and, despite the progress made in the treatment of HIV/AIDS, it is estimated that 36.7 million people in the world living with HIV in 2017 [1]. In the year 2016 and until June 30, 2017, 1,030 new cases of HIV infection were reported, corresponding mostly (99.7%) to individuals aged ≥ 15 years. Portugal has had the highest rates of new cases of HIV and AIDS infection in the European Union [2]. We found that it is not possible to stop the HIV epidemic only with medical interventions. It is vital to address in everyday life the underlying social issues that prevent people from accessing interventions for prevention, diagnosis and treatment of infection, including unequal human rights, stigma and discrimination. When a person is stigmatized or unable to access services as a result of discrimination, the health of the entire community is threatened and epidemic HIV transmission continues to expand rather than to contract [3].

Objective To understand how people live with HIV/AIDS, everyday life in an island space.

Methods Qualitative study, grounded theory [4], in-depth interviews were carried out, in a convenience sample, to seropositive adults of any sexual orientation who wished to talk about their experience. Data analysis included initial coding, grouping of codes, identification of categories/subcategories and memos. Fulfilled ethical requirements and assent of an ethics committee were obtained.

Results Participants were between the ages of 25 and 67 and had primary education as well as secondary education. The analysis of the data gave rise to three categories: “living with fear”, “surviving” and “facing fear”. The data are discussed in the light of the theory of transitions [5] of how to live everyday life in an island space.

Conclusions We hope that the findings help in understanding the daily lives of people with HIV/AIDS, because in order to overcome this transition they have to reconfigure their way of living, especially when living on an Island. Realize how they face and fight in the daily life against stigma; what are the most demanding situations they face and what strategies they use. The strategies used and suggested will give subsidies to the health system and nursing professionals towards the design of new programs that will enable each patient to respond to their individual needs with the resources that each one has.

References
Validation of the nursing diagnosis of impaired walking in elderly
Cristina Marques-Vieira1,2, Luís Sousa3,4, Débora Costa5, Cláudia Mendes5, Lisete Sousa5,6, Silvia Caldeira1,2
1Lisbon School of Nursing, Institute of Health Sciences, Portuguese Catholic University, 1649-023 Lisbon, Portugal; 2Interdisciplinary Research Center for Health, Portuguese Catholic University, 1649-023 Lisbon, Portugal; 3Curry Cabral Hospital, Central Lisbon Center Hospital, 1069-166 Lisbon, Portugal; 4Atlântica School of Health, 2730-036 Barcarena, Portugal; 5Faculty of Science, Lisbon University, 1749-016 Lisbon, Portugal; 6Statistics and Applications Center, Lisbon University, 1749-016 Lisbon, Portugal
Correspondence: Cristina Marques-Vieira
(cristina_marques@ics.lisboa.ucp.pt)
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Background
The increase in longevity causes restriction of activity in the elderly, causing changes on the execution of daily activities and consequently on the quality of life [1]. Walk is an activity that requires using a variety of skills and can be highly complex particularly for the elderly people [2]. The nursing diagnosis impaired walking is part of NANDA International since 1998 and requires further validation to improve the clinical evidence [3].

Objective
To validate the nursing diagnosis impaired walking in a sample composed of elderly.

Methods
Observational, cross-sectional and quantitative study. After the first research phase of systematic literature review several defining characteristics and related factors of the diagnosis impaired walking have been listed [2]. Then, the translation, linguistic and cultural adaptation of the nursing diagnosis was conducted, and finally, the clinical validation of the diagnosis using the clinical validation model of Richard Fehring [4], in a sample of elderly and counting on the collaboration of registered nurses and rehabilitation nurses to collect the data and fill the questionnaires, which comprised demographic data, the defining characteristics, related factors and falls efficacy scale international [5]. The study was approved by the ethical committee of SESARAM. E.P.E (Madeira Island Healthcare System).

Results
In the systematic literature review 17 defining characteristics and 34 etiological factors of impaired walking have been identified. A European Portuguese version was obtained to validate in a sample of 126 elderly, whose average age was 73.86 years, mostly female, with the primary school, in a situation of retirement, widowed and with history of falls. The prevalence of “impaired walk” was 64.3% according to the expert’s opinion and 67.5% according to the elderly. All defining characteristics and related factors have been validated. The most sensitive defining characteristic was nine (e.g. impaired ability of gait speed) and also four related factors (fear of falling, physical deconditioning, medication and feminine gender).

Conclusions
This study justifies the need to review the defining characteristics and related factors of impaired walking. The identification of the most sensitive defining characteristics facilitates nurses’ clinical reasoning and interventions towards effective nursing outcomes.

References

Keywords
Nursing, Nursing Diagnosis, Walking, Gait, Validation studies.
Conclusions
This study found the main risk factors for falls in a sample of community-dwelling elderly. The identification of the most sensitive risk factors may support nurses’ clinical reasoning and interventions for effective fall prevention.

References

Keywords
Nursing, Nursing Diagnosis, Risk for falls, Fear of falling, Validation studies.

P178

Teachers and professors’ mental health: prevalence of self-reported psychological symptoms
Ana Querido1,2, Catarina Tomás1,2, Daniel Carvalho3, Marina Cordeiro1,2, João Gomes
1School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3Santo André Hospital, Hospital Center of Leiria, 2410-197 Leiria, Portugal
Correspondence: Ana Querido (ana.querido@ipleiria.pt)

Background
The work of teaching professionals is recognized to be demanding, involving dynamic interactions with students, parents, colleagues and school authorities [1]. Teaching has been ranked as one of the most stressful profession and its nature is applicable to all professional teaching roles. Several research reports have consistently documented physical and psychological symptoms experienced by teaching professionals. Several physical complaints and psychosomatic symptoms such as lower back pain, headache, voice disorders and anxiety are frequently faced by teaching professionals, both in secondary and higher education, especially in women [1-5]. Presence of psychopathology symptoms in teachers are related to their rating of children mental health behaviors [6], as well as determinants to professional burnout. Therefore, identification of psychological symptoms among teachers is relevant in secondary and higher education.

Objectives
To identify the prevalence of self-reported psychological symptoms; Characterize the symptoms by its dimension and determine the differences in psychological symptoms between high school teachers and higher education professors.

Methods
Cross-sectional correlational study, with a non-probabilistic sample of 96 Portuguese teaching professionals. Data were collected using an on-line questionnaire composed by sociodemographic questions and the Portuguese version of Brief Symptom Inventory (BSI) - 53 items covering nine symptom dimensions: Somatization, Obsession-Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic anxiety, Paranoid ideation and Psychoticism; and three indices of distress: Global Severity Index (GSI), Positive Symptom Distress Index (PSDI), and Positive Symptom Total (PST). Ethical procedures were taken into account.

Results
Teaching professionals were mostly women (70.8%), aged between 30 and 62 years old (Mean=44.8; SD=7.86), 43.8% with a bachelor degree, 27.1% diagnosed with a mental disease, and 41.1% acquainted with mental health patients. Professors (37.5%) were from different fields, including health, engineering, arts, communication, social sciences, marketing and sports. High school teachers (62.5%) were mainly from sociology, philosophy and mathematics. The most scored dimension was Obsession-Compulsion in high school teachers (Mean=1.03; SD=0.75). Globally high school teachers revealed more symptoms of distress than higher education professors. Significant differences between groups were found in Somatization, Obsession-Compulsion, Interpersonal Sensitivity, Depression, Anxiety, Phobic Anxiety, Psychoticism, GSI and PST (p < 0.05). In the 53 BSI items, the PST was low (Mean=19.09; SD=12.70).

Conclusions
Prevalence of symptoms were high in the samples of teaching professionals, although they experienced psychological distress in low intensity. Differences between high school teachers and higher education professionals were highlighted in this study. Therefore, there is a need for intervention among high school teachers to minimize the impact of detecting mental disorders in students, as well as preventing professional absents and burn-out.

References

Keywords
Mental health, Psychological symptoms, Teachers, Teaching professionals.

P179

Generating high vegetable liking among young children to promote healthy eating: results from an intervention at a kindergarten school
Cátia Braga-Pontes1,2, Ana Pinto Moura3, Luís Cunha4
1Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 3Sciences and Technology Department, Open University of Portugal, 4200-055 Porto, Portugal; 4Department of Geosciences, Environment and Spatial Planning, Faculty of Sciences, University of Porto, 4485-661 Vila do Conde, Portugal.
Correspondence: Luís Cunha (lmcunha@fc.up.pt)

Background
Fruit and vegetables have always played a prominent role in dietary recommendations because of their high concentration of vitamins, minerals, phytochemicals and because they are a great source of fibre [1,2]. Recent data show that in general, the population should...
at least double consumption of fruit and vegetables in order to reach the 400g/day recommended by World Health Organization (WHO) [3]. In Portugal, the data presented by the National Food Survey in 2017 showed that 68.9% of children do not consume more than 400g/day of fruit and vegetables, highlighting a lower consumption of vegetables compared to fruit [4].

Objective
The purpose of this study was to evaluate the impact of a food intervention, with exposure combined with a tangible reward, on food neophobia, liking and intake of different vegetables, at the kindergarten school environment, in the South of Portugal.

Methods
Children (n=82) aged 2 to 5 years old, from different classes, were randomly assigned by class to intervention (n=68) or control group (n=16) and the intervention lasted nine weeks. Children food neophobia [5] and eating behaviour [6,7] were evaluated by parents at the beginning of the intervention. Mother’s food neophobia [8] was also measured. In each week, children attended an educative session about the vegetable they would eat at lunch (carrot, bell pepper, broccoli, tomato, cucumber, purple cabbage, spinach, arugula and beet), being rewarded with a sticker when eating the vegetable. Assessments of intake and liking were recorded at baseline sessions and after each exposure, using ASTM’s pictorial scales for children [9]. Children at control group were exposed at the same experiment after the intervention group during the subsequent nine weeks.

Results
Children from both groups presented high levels of liking for the different vegetables, with this being modulated by the children’s traces of personality and eating behaviour.

Conclusions
Exposure to the different vegetables with a playful approach yields high liking scores for a range of vegetables, indicating that such an approach has good potential to overcome vegetables avoidance by young children.

Trial Registration
NCT03513081

References

Keywords
Children, Food Neophobia, Playful intervention, Vegetables.

P180 The limitations of medicinal package leaflets
Ana P Izidoro1, Patrícia Correia1
1Farmácia Rainha, 5140-067 Carrazeda de Ansiães, Bragança, Portugal;
2Escola Superior de Saúde do Porto, 4200-072 Porto, Portugal
Correspondence: Ana P Izidoro (anaizidoro20@gmail.com)
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Background
It is known that, in order to solve most of the existing health problems, it is often fundamental that a pharmacological approach exists. For this reason, patients must be adequately informed about their health status and about the medicines they are using. One of the most important resources of medicines information, available for patients, is the information leaflet. It provides a set of understandable information and should contribute to the appropriate and safe use of information, complementing the information given by health professionals. However, the content appears to be quite complex or too technical and the text is very dense and with a reduced font size, making it intimidating and difficult to read.

Objectives
The main objectives of this study are: to identify if users read the information leaflet and whether reading frequency is associated with the importance they attribute to it; and to identify the limitations attributed by the respondents to information leaflets and possible relationships with the socio-demographic characteristics of the population.

Methods
This was a transversal and inferential descriptive observational study, which took place between March and November, 2017, based on the application of a questionnaire in the form of an interview to 320 Bragança residents. Various data were collected, particularly with regard to the frequency of reading the information leaflets, the importance attributed to the same or each section, and existing limitations.

Results
Regarding the possible relationships between the data obtained, it was verified that there is sufficient statistical evidence to affirm that there is an association between the reading frequency of the information leaflet and the importance attributed to it, but the same cannot be trusted as to the association between the limitations attributed to the information leaflets and the socio-demographic characteristics of the respondents.

Conclusions
In sum, these associations and the fact that most respondents have indicated, as the main limitation in reading information leaflets, the use of very technical language, may mean that the information leaflet is not being developed in order to promote reading by part of the youngest or the oldest, which are the groups presenting the major reading difficulties.

Keywords
Information leaflet, Illiteracy, Information, Limitations, Adherence to therapy.
Background
The transition to higher education is one of the risk factors in the adoption and maintenance of healthy lifestyles [1] and, at this stage, many students develop concerns related to eating habits, their body [2] and body image.

Objective
This correlational study had two main objectives, namely, to characterize eating habits and the perception of body image among higher education students; and to relate eating habits to the students’ perception of body image.

Methods
We used a questionnaire to collect socio-demographic and anthropometric data, an eating habits scale [3] and the body shape questionnaire [4]. The non-probabilistic convenience sample consisted of 386 students, with mean age of 21.94 years (SD = 5.30), of which 82.9% were females.

Results
According to WHO Body Mass Index classification, 72.3% of the students presented normal weight, 14% pre-obesity and 6.2% moderate thinness. From the point of view of the concerns related with body image, the majority, 54.7% presented no distortion of body image. However, the remaining 45.3% presented distortion of body image and among these, 16.6% presented severe distortion. From the point of view of eating habits, the results show that the sample had adequate eating habits. The majority of respondents ate 5 (36.3%) or 4 (32.6%) meals per day and for the four dimensions of the eating habits scale (quality, quantity, variety and food adequacy), the scores varied between a minimum of 2 and a maximum of 5, where the highest mean value was found at the level of food variety (M = 3.62, SD = 0.53) at the lowest mean value observed was found at the level of food quality (M = 3.40, SD = 0.56). The correlations between the dimensions of the eating habits scale (quality, quantity, variety and food adequacy) and students’ perceptions of body image are statistically non-significant (respectively, r = 0.099; r = 0.011; r = -0.046; r = -0.038 and p > 0.05).

Conclusions
Although the results show that these students have adequate eating habits, it is important to continue to study the food culture of the populations, to identify individuals at risk, to intervene from the point of view of promoting the acquisition of healthy eating habits, and to study the factors underlying the distortion of body image and its influence on students’ physical and mental well-being.

References

Keywords
Eating habits, Body image, Students.

P182
Psychosocial impact of the assistive technologies for mobility on the participation of wheelchair’s users
Anabela Martins1, João Pinheiro1, Patricia Francisco1, Inês Domingues2
1Physiotherapy Department, Coimbra Health School, 3046-854 Coimbra, Portugal; 2Faculty of Medicine, University of Coimbra, 3004-504 Coimbra, Portugal
Correspondence: Anabela Martins (anabelacmartins@estescoimbra.pt)
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Background
Recognizing that assistive technology (AT) for mobility play an important role in their users’ participation, it will be useful to rehabilitation professionals and services to assess if the perceived psychosocial impact of such devices and associated services, systems and policies contributes to enhance lifelong capacity and performance [1-3]. To build comprehensive rehabilitation services, information on a person’s experience in every aspect of his/her life is essential, as well as the role of AT on functioning and, particularly, in participation.

Objective
To study the psychosocial impact of manual and powered wheelchairs on the participation of their users.

Methods
From May to December 2017, sixty AT users (30 powered and 30 manual wheelchairs), aged 28-66 (mean 46.63 ± 10.66) years old, 53.3% female, with mix diagnosis, were interviewed using the Psychosocial Impact of Assistive Devices Scale (P-PIADS), the Activities and Participation Profile related to Mobility (PAPM) and demographics, clinical and questions about AT use and training.

Results
The participation profiles revealed that 6.7% of the participants present no restrictions, 20.0% mild, 35.0% moderate and 38.3% severe restrictions in social participation. All subscales (competence 1.50, adaptability 1.45, self-esteem 1.15) and P-PIADS total (1.38) were positive and moderately correlated to the activities and participation profile. Age and type of wheelchair and training of AT as an intervention do not influence statistically the participation, however, number of years on a wheelchair does. In general, training experiences were described as occurring in a clinical setting base, in terms of to enhance the capacity for handing the new device, with less attention to users’ performance in the community and at home, reducing the barriers and promoting a facilitator environment.

Conclusions
These results encourage the authors to keep studying the impact of AT for mobility on participation, namely the manual and powered wheelchairs, to develop robust evidence for rehabilitation, giving a contribution to the efforts of the Global Cooperation on Assistive Technology Initiative, and create support for Rehabilitation 2030 A Call for Action4.

References

Keywords
Assistive Technologies, Wheelchair, Psychosocial impact, Social participation.
The disciplinary and professional coherence of these therapies, as well as the therapeutic efficacy they present, legitimize, from the perspective of nurses, the innovation they constitute in the practice of care.

Objective
To understand the process of integrating nonconventional therapies into nursing practice, in the dimensions: identification of therapies in use; meanings assigned and used strategies evaluated by nurses and patients.

Methods
Grounded Theory was used, in the constructivist perspective of Kathy Charmaz. The main data collection techniques were the intensive interview and participant observation. Participants were 15 nurses from 9 public hospitals, from the district and central levels, from the north, central and south of the country, and a team of 10 nurses and 17 users of a pain service from an oncology hospital.

Results
From the results we point out: nurses innovate their practice of care through the use of nonconventional therapies of environmental, manipulative, mental-cognitive, energetic and relationship nature. The physical, social and normative environments condition the practice of these therapies; the modes of action evidence the importance they confer to the ethical aspects and the (re)combination of several techniques, result in innovative and individualized care. Nurses evaluate these therapies as very effective in various health/illness situations, emphasizing their contribution to well-being.

Conclusions
Conclusions and implications of the study: nurses identify a sense of high conceptual and professional coherence of nonconventional therapies with nursing, considering that they innovate and considerably increase the repertoire of practice. The innovation of Nursing practices, through the integration of these therapies, contributes to the well-being of the people cared for and enables them to better manage their health, which is relevant in an aging society.

Keywords
Unconventional therapies, Nursing, Innovation practices, Well-being.

P184
Translation and cultural adaptation of English Modified DABS (EMDABS) Scale for Portuguese language
Pedro JC Luz1,2 (pedrojc luz@gmail.com)
1Hospital Professor Doctor Fernando Fonseca, 2720-276 Lisbon, Portugal; 2Lisbon Nursing School, 1600-190 Lisbon, Portugal
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Background
The occurrence of aggressive episodes by clients in the contexts of mental health settings are recurrent, being imperative to adapt staff interventions to stabilize the psychopathological state of the client, consequently reducing the risk of injury. The de-escalation technique prevents the escalation of aggressiveness, allows a relationship of trust to be established by demonstrating understanding of the client’s problems and concerns [1]. The same authors performed the psychometric validation of the English modified De-Escalating Aggressive Behaviour Scale (EMDABS). This scale aims to evaluate the education/training and de-escalation skills of health professionals, based on seven items: “valuing the client; reducing fear; inquiring about client’s queries and anxiety; providing guidance to the client; working out possible agreements; remaining calm; risky”. The scale revealed a high level of consistency between the seven items of the de-escalation α=0.901.

Objective
This study aims to translate and effect the cultural adaptation of the EMDABS scale to the Portuguese language in order to improve nursing de-escalation techniques.

Methods
The translation and cultural adaptation of this instrument followed a methodological sequence: translation of the scale into Portuguese; focus group discussion; retroversion to English and pre-testing [2].

The study was authorized by the hospital ethics committee. The participants of the focus-group agreed to participate freely and clarified.

Results
The first translation was carried out by two teachers, born in Portugal and fluent in English, with a Degree in Modern Languages and Literatures. Conceptual translation was privileged instead of literal translation, promoting the conservation of simple and accessible language characterized by the original instrument. The translation was evaluated by a focus group of 6 professionals with experience in the field, all participants speak Portuguese and are fluent in English, having evaluated the translation obtained and suggested necessary changes. The translation was then back-translated into the English language, by a Clinical Psychologist, from South Africa, with English native language, fluent in Portuguese, with experience in the field, as well as in the translation of evaluation instruments. This professional had no previous contact with antecedent versions of this instrument. The Pre-testing was applied to a group of ten nurses to evaluate the adequacy of the structure and items of this scale, as well as to validate eventual difficulties in filling it.

Conclusions
In the pre-test, the instrument showed a good internal consistency and the participants did not present filling difficulties. The next step is to determine the psychometric properties of the scale.

References

Keywords
Aggressive behavior, Cultural adaptation, De-escalation, Mental illness, Nursing interventions.

P185
Supporting informal caregivers of people dependent in self-care
Maria A Dixe1,2, Ana CS Cabecinhas1, Ana JCF Santos1, Marina G Silva1, Maura R Domingues1, Ana Querido1,2
1Center for Innovative Care and Health Technology, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal; 2School of Health Sciences, Polytechnic Institute of Leiria, 2411-901 Leiria, Portugal
Correspondence: Maria A Dixe (maria.dixe@ipleiria.pt)
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Background
Informal caregivers (IC) are crucial in care provision to dependent patients, frequently aged and suffering from chronic diseases. Therefore, besides helping the dependent people carrying out daily activities, they should also provide them support and assistance in dealing with self-care difficulties.

Objective
This quantitative exploratory descriptive study aims to: identify self-care needs in which the person is dependent, and the dependency degree; identify socio-demographic characteristics and ICs support to care for a dependent-person; identify the type, quality of information provided to the IC and the health-professional who delivered the information; assess the perception of ICs regarding their abilities to care for dependent-patients.

Methods
An intentional sample of thirty-three dyads of dependent-patients (at least in one self-care daily activity) and their caregivers participated in this study. Participants were referred by the hospital health-care team of a hospital service, at the time of discharge. Dependent people clinical and sociodemographic data were collected from clinical files. ICs answered a structured interview composed by sociodemographic and professional data, type of support in caring for dependent-person, ability of ICs to care for the dependent-person
and to promote self-care. This study was approved by the ethic committee of the hospital where the study was conducted (nº 24/2017).

Results
The majority of dependent-persons were female (60.6%) with a mean age of 81.6 (±11.3) years. Regarding self-care activities, the majority of persons were dependent and did not take part in preparing medication (66.7%), preparing food for ingestion (51.5%), nor in obtaining objects for the bath (51.5%). Caregivers were mostly women, mean age of 61.4 (±12.1) years old. Regarding family ties, is mostly a son/daughter (39.4%) or a spouse (33.3%) who takes care of their family member on average for 63.9 (±93) months. Nurses were the main providers of information, nonetheless most of the caregivers were not provided with information about auxiliary equipment (79.3%) nor economic support available (71.0%). ICs feel less competent in caring for a dependent-person regarding ability to transfer. Ability to dress was the area in which the dependent-person presented the highest degree of dependence. Regarding “feeding”, ICs refer the identification of signs of malnutrition and dehydration as the main difficulty.

Conclusions
Supporting families in acquiring practical problem-solving skills in every day’s life, in the management of resources and of emotional needs of the dependent-person should be promoted by health professionals at the beginning of hospitalization, in order to take good care of the family member and of oneself.

Acknowledgments
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Keywords
Capacity, Informal caregiver, Self-care, Dependent-person, help2care project.

P186
Absenteeism on nurses in primary health care
Rosa M Freire1, Rosário Vieira2, Elizabete Borges2
1Escola Superior de Enfermagem do Porto, 4200-072 Porto, Portugal;
2Agrupamento de Centros de Saúde Tâmega & Vale do Sousa Sul, 4560-682 Porto, Portugal

Correspondence: Rosa M Freire (rosafreire@esenf.pt)

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Background
The Primary Health Care reform and the introduction of Health Centre Groupings brought changes in the management standards in force until then. The new model care reorganized and changed work contexts and human resources. The new organizational paradigm requires adaptation of the professionals to this new reality. In any situation of change people react with resistance and adapt to the new reality. In any situation of change people react with resistance and adapt to the new reality. In any situation of change people react with resistance and adapt to the new reality. In any situation of change people react with resistance and adapt to the new reality.

Objective
To identify the presence and causes of absenteeism and analyse the relationship between absenteeism and demographic and professional variables.

Methods
Quantitative, exploratory and cross study was used as methodology. A sociodemographic/professional questionnaire and questions related to absenteeism were used for the collection of data. The sample was composed by 109 nurses working at primary health care units of northern Portugal. The sample was composed by 77.1% of females, 54.1% aged more than 36 years, 72.5% married, 82.6% working on fixed schedules, 51.4% with nearly 14 years of job experience (varied between 7 and 33 years), and 81.7% considered their job as stressful.

Results
Of all nurses, 66% admitted to having been absent from service in the last year: 28.4% due to their own illness and 16.5% due to their relatives’ illness. Statistically, there were found significant differences in the association between the variables of to have children (p = 0.007), place of work (p = 0.045) and absenteeism. We also found that nurses with children and those who work in Health Family Units are the ones that are absent from work most frequently.

Conclusions
We believe that the results can induce the development, implementation and evaluation of preventive measures, aiming at the promotion and protection of nurses’ health. In this regard, they can be crucial for the management of human resources and for strategic planning of the ACeS, in particular, in grounded decision-making.

References

Keywords
Nurse, Absenteeism, Primary health care, Management in nursing.

P187
Assessment and intervention in a family with a care dependent person and mental illness: a case study
Inês Esteves, Isabel Bica
Health School, Polytechnic Institute of Viseu, 3504-510 Viseu, Portugal
Correspondence: Isabel Bica (isabelbica@gmail.com)

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Background
Mental illness can have profound repercussions in family dynamics, since it is a serious illness and generates great stress. The assessment and intervention of a family with psychosocial problems requires the nursing team to use models that allow the design of care oriented both for data collection and for the planning of interventions in domiciliary context.

Objective
To analyse the care needs in a family with mental illness using the Dynamic Model of Family Assessment and Intervention (MDAIF).

Methods
The case study focused on the process of family intervention developed with a family in a domiciliary context in Primary Health Care, according to MDAIF. The following data collection instruments were applied: genogram, ecomap, FACES II, Graffar and Family Apgar Scales.

Results
The family consists of a middle-aged couple, childless, lower middle class (grade IV, Graffar, 1956). The woman is the main care provider of her husband, with mental illness. They have an extensive network of community support, namely in Social Solidarity Institutions, Recreational Associations, the extended family and the Community Care Unit (health team). As a couple, they show good cohesion and adaptability facing everyday problems (Faces II Scale) and perceive their family as highly functional (score 10 - Apgar Scale), despite the expectation of communication difficulties and emotional expression. After the interventions of the nursing team, in the different dimensions of the MDAIF, gains were obtained in the knowledge and capacity of income management, heating system of the residential building, management and knowledge about the mental illness, communication and marital satisfaction and the role of caregiver. In this way, the caregiver has been trained in knowledge and skills in the field of care for
the dependent person and with mental pathology, in order to maximize their health, as well as in the care and importance of the satisfaction of her own needs.

Conclusions
The valuation of caregiver perspectives is essential for the adjustment of the formal responses of the nursing team. Empowerment of family caregivers - as well as being able to express themselves and be an active element in the healthcare process, as well as the articulation of formal and informal responses constitute challenges for health professionals. The support provided by the health team to the caregiver and dependent patient has proved to be effective not only in improving family functioning but also in reducing stress, burnout and isolation of the caregiver.

Keywords
Caregiver, Family, Nursing, Primary health care.

References

Keywords
Portugal, Elderly people, Physical therapy services, Physical therapy human resources.

P189
Ultrasound evaluation of subcutaneous tissue and relation with the evaluation of fat mass in women with cellulitis
Alexandra André, João P Figueiredo, Oscar Tavares, Catarina Bulamarkui, Catarina Frade
Escola Superior de Tecnologia da Saúde de Coimbra, Instituto Politécnico de Coimbra, 3046-854 Coimbra, Portugal
Correspondence: Alexandra André (alexandra.andre@estescoimbra.pt)

Background
Ultrasound (US) is an easily accessible imaging modality that allows the evaluation of various structures. Despite the potential of this technique there are a few studies referring to subcutaneous tissue analysis with US. This allows the evaluation of altered tissues such as gynoid lipodystrophy, a very common alteration in female. The better the characterization, location, definition of the affected areas and the degree of severity of LDG, the greater the success of treatment. In this study US and densitometry was performed to evaluate the thickness of the subcutaneous tissue and the body mass composition, such as lean mass and fat mass.

Objective
The aim was, by using two different images modality, to evaluate the subcutaneous tissue in normal weight and overweight, as well as the possible relation with the percentage of fat in women with cellulite.

Methods
We aim to understand the current and future numbers of the elderly people at the regional level (NUTS III); to know the current number of physiotherapy services and human resources at the same regional level; to prospective the future physical therapy services and human resources, considering the health political trends related to services and human resources; and to assess if these services and human resources respond to the needs of the current and future elderly people.

Conclusions
In this way, we conclude that current and future physiotherapy services and human resources do not respond to the needs of the current and future elderly population, and there is a need to adapt physiotherapy services and human resources to the current and future demographic reality, in order to achieve better levels of healthy life expectancy.

P188
Elderly people, physical therapy services and human resources: current and future challenges
Carla Leão1,2 (carlaleao@sapo.pt)
1 Escola Superior de Saúde, Universidade Atlântica, 2730-036 Barcarena, Portugal; 2 Instituto Português de Relações Internacionais, 1000-155 Lisboa, Portugal

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Background
The aging process implementation in Portugal, and the consequent increase in the number of elderly people is evident and constitutes an increasing process. Undeniably, the elderly people are the main users of health services and specifically physiotherapy services. The economic and financial crisis that affected Portugal, has imposed restrictions on the health system and specifically on the National Health Service (NHS) [1]. Considering this scenario, we have put as a guiding question: Are, in Portugal, physiotherapy health services and human resources included in the health system at NUTS III regional level, and essentially in the NHS, proportional to the number of elderly people and respond to their current and future needs? [NUTS III - Nomenclature of territorial units for statistics (NUTS) with level III corresponding to the territorial division constituted by 30 regions, according to the division of 2013].

Objective
We aim to understand the current and future numbers of the elderly people at the regional level (NUTS III); to know the current number of physiotherapy services and human resources at the same regional level; to prospective the future physical therapy services and human resources, considering the health political trends related to services and human resources; and to assess if these services and human resources respond to the needs of the current and future elderly people.

Methods
For this purpose, we performed a statistical analysis at the regional level NUTS III, considering the indicators - number of elderly people and physical therapy services and human resources. We used the data from the Statistics National Institute, the Health Regulatory Body, the Portuguese Physiotherapists Union and the Portuguese Association of Physiotherapists.

Results
The results showed that at the regional level (NUTS III), physiotherapy services and human resources are scarce and there is no proportionality between the number of elderly people and the physiotherapy services and human resources. With the increasing number of elderly people and the restrictive political trend, we assume that, if the political trends continue, proportionality will remain non-existent.

Conclusions
In this way, we conclude that current and future physiotherapy services and human resources do not respond to the needs of the current and future elderly population, and there is a need to adapt physiotherapy services and human resources to the current and future demographic reality, in order to achieve better levels of healthy life expectancy.

References

Keywords
Portugal, Elderly people, Physical therapy services, Physical therapy human resources.