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COSTA DE OLIVEIRA**

**Motivação, cooperação e coping numa equipa de Andebol
de 2ª divisão**

**Motivation, cooperation and coping in a 2nd division
handball team**



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Tese apresentada à Universidade de Aveiro para cumprimento dos requisitos necessários à obtenção do grau de Mestre em Psicologia da Saúde e Reabilitação Neuropsicológica, realizada sob a supervisão científica da Doutora Elisabeth de Jesus Oliveira Brito, Professora da Escola Superior de Tecnologia e Gestão de Águeda da Universidade de Aveiro. E do Doutor Carlos Silva Fernandes, professor catedrático da Universidade de Aveiro

Dedico este trabalho ao meu defunto avô Alfredo De Oliveira Goncalves
Leques por todo o apoio que me deu em vida.

O júri

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Palavras-chave

Andebol; Motivação Intrínseca; Motivação Extrínseca; Coping; Cooperação de equipa.

Resumo

Sabe-se que a motivação tem um papel importante no desporto; em conjunto com as estratégias de coping e os níveis de cooperação. Foi realizado um estudo envolvendo 19 jogadores masculinos de andebol, do clube desportivo Feirense. A escala *Brief COPE*, a escala de motivação desportiva 28 (SMS-28) e o questionário de cooperação desportiva versão Portuguesa (SCQ-p) foram aplicados com o objetivo de criar um perfil para estas variáveis. Os resultados mostraram um perfil caracterizado pela motivação intrínseca, a cooperação incondicionada, a cooperação com o treinador, a cooperação com a equipa, o coping ativo, o planeamento e a aceitação.

Keywords

Handball; Intrinsic motivation; Extrinsic motivation; Coping; Team cooperation.

Abstract

It is known that motivation plays an important role in sports; alongside coping strategies and cooperation levels. A study was carried out involving 19 male players from a second division handball team in the Feirense sports club. the Brief COPE scale, the Sport motivation scale 28 (SMS-28) and the Sportive cooperation questionnaire Portuguese version (SCQ-p) were applied with the objective to build a profile of these variables. The results showed a profile were intrinsic motivation, unconditioned cooperation, cooperation with the coach, team cooperation, active coping, planning and acceptance were the central characteristics of the studied team

Tables list.....	iii
Figures List.....	v
Abbreviations list.....	vii
1. Motivation, cooperation and coping in a 2nd division handball team Handball in Portugal	1
<i>1.1 Motivation theories applied to sport.....</i>	<i>1</i>
<i>1.2 Sportive cooperation.....</i>	<i>3</i>
<i>1.3 Coping in sports.....</i>	<i>3</i>
2. Objectives	3
3. Methods	4
<i>3.1 Participants.....</i>	<i>4</i>
<i>3.2 Instruments.....</i>	<i>4</i>
3.2.1 Brief COPE.	5
3.2.2 Sport Motivation Scale.....	6
3.2.3 Sportive cooperation questionnaire SCQ-p.....	6
<i>3.3 Procedure.....</i>	<i>7</i>
<i>3.4 Data Analysis.....</i>	<i>7</i>
4. Results.....	8
<i>4.1 Descriptive analysis</i>	
4.1.1 Brief COPE Results.....	8
4.1.2 SMS-28 Results	9
4.1.3 SCQ-p Results	9
<i>4.2 Correlations</i>	<i>10</i>
5. Discussion	15
6. Conclusion	17
References	18

Tables list

Table 1: Demographic and sportive characteristics of the participants.	4
Table 2: <i>Subscales of the Brief Cope, adapted from Ribeiro & Rodrigues (2004).</i>	5
Table 3: <i>Subscales of the SMS-28, adapted from Costa et al., (2011)</i>	6
Table 4: <i>Subscales of the SCQ-p, adapted from Almeida et al., (2013).</i>	7
Table 5: Correlations	12

Figures List

Figure 1: Brief Cope mean scores.....	8
Figure 2: SMS 28 mean scores.	9
Figure 3: SCQ-p mean scores.	10

Abbreviations list

ACP = Acceptance | Aceitação

AMO = Amotivation | Desmotivação.

BD = Behavioral disinvestment | Desinvestimento comportamental

COP-A = Active Coping | Coping ativo

C-COA = Cooperation with the coach | Cooperação com o treinador.

C-CON = Conditioned cooperation | Cooperação condicionada.

C-UNC = Unconditioned cooperation | Cooperação incondicionada.

C-OUT = Cooperation outside the playing field | Cooperação fora do campo de jogo.

C-TEA = Team cooperation | Cooperação de equipa.

DEN = Denial | Negação

FE = Feelings Expression | Expressão de sentimentos

HUM = Humor | Humor

IS = Using instrumental support | Utilizar suporte instrumental

ME-I = Extrinsic motivation through introjection | Motivação extrínseca através da introjeção.

ME-ID = Extrinsic motivation of identification | Motivação extrínseca de identificação.

ME-RE = Extrinsic motivation towards external regulation | Motivação extrínseca orientada a regulação externa.

MI-AO = Intrinsic motivation towards achieving objectives | Motivação intrínseca orientada a alcançar objetivos.

MI-EE = Intrinsic motivation to stimulating experiences | Motivação intrínseca das experiências estimulantes.

MI-K = Intrinsic motivation to know | Motivação intrínseca de conhecer

PLAN = Planning | Planear

PR = Positive reinterpretation | Reinterpretação positiva

REL = Religion | Religião

SB = Self-blame | Auto-culpabilização

SES = Using Social-emotional support | Utilizar suporte social emocional

SC = Substance consumption | Uso de substâncias

SD = Self-distraction | Auto distração

SCQ-p = Sportive cooperation questionnaire, Portuguese version | Questionário de cooperação desportiva, versão portuguesa.

SMS-28 = Sportive motivation scale | Escala de motivação desportiva

Motivation, cooperation and coping in a 2nd division handball team Handball in Portugal

Nowadays, sport is undoubtedly one of the most relevant social phenomena, the importance of which can be seen in the exponential increase in visibility that different sports have suffered in recent years. Particularly Handball, although isn't the main sport (this title is taken by Soccer) is a sport that enjoys great popularity worldwide, being among the top most popular sports in Portugal, ranking in second in 2016 (Rosado & Sigrad, 2016). Is present in the country since 1939, with the foundation of the Portuguese Handball Federation. Nowadays Portuguese Handball Federation account 23 Handball Associations which includes 292 Clubs/ Teams that practice the modality in different areas (indoor, beach handball or Wheelchair Handball). The majority of the Clubs include teams of different age groups (from *Manitas* teams with 5/6 year-old athletes to Senior or Veteran adults teams), having proximally a total of 49532 modality athletes, who compete in different divisions (from regional to the first National league, as well as International competitions) (data provided by the Portuguese Handball Federation). With raising popularity, some Clubs have begun to invest into better ways to raise competitive performance and improved training, with the Feirense Andebol Club (Clube Desportivo Feirense – Secção de Andebol), taking the lead in the field.

However, there is a lack of literature addressing this sport's physical and psychological aspects (Póvoas et al., 2017, p. 1). This trend continues to this day, whereas few and sparse scientific literature was found at the moment of writing this study.

Motivation theories applied to sport

The Achievement Goal Theory of Motivation was developed by Ames Carole (1992). Part of this theory shows 2 distinct types of mindsets relating to achieving goal. The first one is task oriented, meaning that success relies on effort, interest, and learning/improving skills. While the Ego oriented mindset sees these values as the means to an end, meaning social status or wealth.

Motivation has been proven an important driving factor in overall performance in competitive sports. Authors like Santos, (2009), and Massuça, Fragoso and Teles, (2014) explain that behaviors with a strong motivational component tend to be more persistent, more efficient and better focused than behaviors without this motivational component. In this line of thought, Navea (2015), distinguishes that, in sports context, Intrinsic motivation

takes place because of the mere interest the player has for said sportive activity; while on the contrary, Extrinsic motivation is related to the achievement of goals, that even when associated with an activity it remains external to it.

Going back to the mindsets explained by Ames (1992) in her Achievement Goal theory, we can be extrapolated those mindsets to intrinsic and extrinsic motivation; with the ego-oriented mindset corresponding to extrinsic motivation while the task-oriented mindset corresponds to intrinsic motivation.

Moreover, there is a concept linked to extrinsic motivation that is related to success in team sports, which is team cohesion, which was defined by Carron, Brawley and Widmeyer (cit in. López Nadal & Frutos Salvia, 2011), as a dynamic process that is reflected in the tendency of the group to stay and remain united in the search of its instrumental objectives and / or for the satisfaction of the members' affective needs.

On the other hand, it's been established that the relationship between the concepts of extrinsic motivation and team cooperation, a study by (Vallerand, 1997) increased team cohesion and an autonomy-supportive interpersonal style of basketball coaches increased perceptions of the three psychological mediators, which in turn increased intrinsic motivation (Ntoumanis, 2001, p. 228) Now, having established the influence of motivation in both its intrinsic and extrinsic modality, as well as team cohesion concerning the individual performance of athletes in team sports.

In the context of sports, these motivation styles, have been widely investigated (Balaguer, Castillo, Ródenas, Fabra, & Duda, 2015). These authors, when referring to the Self-Determination theory; explain that there is a continuum of self-determination trough which sport player conduct their activity. Signaling a positive correlation between motivational quality, players overall performance and team cohesion.

This theory of Self-determined motivation indicates that there are two distinct types of motivation, one intrinsic and one extrinsic to the person; meaning that in the first case motivation is regulated as an internal process, while in the second its regulated in a scale of external and internal sources (Deci & Ryan, 2008). According to these authors, there are 3 basic needs that drive motivation 1) Autonomy; which is the perception that one is in control of its own destiny and behavior. 2) Competence: which are the cumulative capacities that allows the individual to achieve its goals. And 3) Relatedness or belonging which is the feeling of connection between the individual and the people and causes surrounding him.

Sportive cooperation

Carron (cit in. Balaguer et al., 2015) defines team cooperation as a dynamic process reflected in the tendency in a team to remain together with the finality of achieving their instrumental goals and/or the fulfillment of affective need of their members. (Duda & Balaguer, 1999) Signal the relevance the coach has in creating a motivational climate that influences team cooperation. In a more recent study, Balaguer et al. (2015) studied motivation variables using the Sports Motivation Scale (SMS-28), and their relationship with emotional regulation and team cooperation. They referred that a higher level of cooperation in sportive teams is a desirable trait due to its relation with a higher internal team functioning, higher performance and higher satisfaction in team members; their results showed a relationship between intrinsic motivation and task cohesion; they emphasized the role that coach behaviors play in creating team cohesion and improving player motivations.

Coping in sports

According to the coping model developed by Lazarus and Folkman (1984) Coping strategies are reciprocal to emotional regulation. This model explains the intervenient variables of coping mechanisms, with a model in which motivational factors and goal-oriented behaviors are described as causal precedents of coping mechanism, signaling them as mediating processes with immediate effects and explaining that the results from the coping mechanisms have a retroactive feedback on the variables that precede it; i.e.: motivation and goal oriented behaviors.

Objectives

This study is part of a greater project taking place in the Feirense Sports Club involving Handball players; this being the first step of the project, which aims to improve the competitive performance of the club's Handball teams.

In the present study seeks to: 1) Measure the motivational, sportive cooperation and coping factors present in the Handball players of the Feirense Sports Club. And 2) observe the relationship between said variables with the aim of creating a profile for the studied team.

Methods

The present study is non-experimental and has a cross-sectional design. We adopted the survey by questionnaire as strategy of data collection. In order to study motivational, coping and team building variables present in the team.

Participants

The study involved the senior 2nd division team of handball from the *Feirense Sports Club* located in the city of Santa Maria da Feira in northern Portugal. The team was chosen by convenience and contacted by the researcher through the club executive committee.

The sample was comprised of 19 male players, aged 17 to 38 years ($M=21,42$; $DP=5,97$). All the sample characteristics can be seen in Table 1.

Table 1: Demographic and sportive characteristics of the participants.

Characteristics	Value range	Total (n=19)
Age in years	17 to 20	14
	21 to 30	3
	31 to 40	2
Type of practice	Amateur	15
	Professional	4
Years of practice	0 to 10	11
	11 to 20	6
	21 to 30	2
Days of training per week	1 to 2	2
	3 to 4	4
	5 to 6	12
	7	1
Hours of training per day	1 to 3	19
Sportive events participation	1 to 5	3
	6 to 10	1
	10 to 15	1
	16+	14

Instruments

Three measurement instruments were used in this research. Namely the Brief COPE to measure coping strategies, the Sports motivation scale (SMS 28) for measuring motivation,

and the sportive cooperation scale; to measure cooperation between team members and their coaches.

Brief COPE.

The Brief COPE scale (Carver, 1997, portuguese version by) is a shorter version of the COPE Scale (Carver, Scheier, & Weintraub, 1989) designed to measure Coping mechanisms. This scale consists of 28 items divided in 14 subscales (2 items per scale), whose answer is given in five levels Likert format ranging between 0 (*I haven't been doing this at all*) to 3 (*I've been doing this a lot*). The averages of the items of each subscale must be calculated and it presupposes the interpretation factor by factor, which translates into a profile of psychological functioning.

Cronbach Alpha (α) for this scale is presented dimension by dimension, these values range from $\alpha= 0,7$ to $\alpha= 0,85$. The subscales presented in the Brief Cope, as well as present study respective α can be seen in Table 2.

Table 2: *Subscales of the Brief Cope, adapted from Ribeiro & Rodrigues (2004).*

Subscales	Definition
Active Coping	Start an action or make an effort to remove or circumvent the stressor
Planning (PLAN)	Thinking about how to confront the stressor, plan the active coping efforts
Using instrumental support (IS)	Seeking help, information, or advice about what to do
Using Social-emotional support (SES)	Seeking empathy or emotional support from someone
Religion (REL)	Increase in participation if religious activities
Positive reinterpretation (PR)	Making the best of the situation, growing through it, or seeing it in a more favorable manner
Self-blame (SB)	Blame or critic oneself about what happened
Acceptance (ACP)	Accepting that the stressor event happened and its real
Feelings Expression (FE)	Increase in the consciousness about the personal emotional stress and the impulse to manifest said feelings
Denial (DEN)	Attempt to reject the reality of the stressor event
Self-distraction (SD)	Mental disinvestment from the objective that the stressor is interfering with, trough daydreaming, sleeping or seeking distractions
Behavioral disinvestment (BD)	Desisting, or stop making effort to achieve the objective with which the stressor is interfering
Substance consumption (SC)	Use of substances like alcohol, drugs (medicaments) to not focus on the stressor
Humor (HUM)	making jokes about the stressor

Sport Motivation Scale.

The Sports Motivation Scale, also known as SMS 28 (Pelletier et al., 1995) is a scale designed to measure the constructs of intrinsic motivation, extrinsic motivation and self-determined motivation; the instrument consists of 28 items which are answered numerically in a Likert scale ranging from 1 (*doesn't apply*) to 7 (*fully applies*). The scale is divided into 7 subscales, possessing overall a Cronbach alpha of 0,90. said subscales can be seen in detail in Table 3.

Table 3: *Subscales of the SMS-28, adapted from Costa et al., (2011)*

Subscale	Definition
Intrinsic motivation to know (MI-K)	Related to personal factors linked to curiosity and the search of understanding that the athlete wishes to achieve in the practiced sport.
Intrinsic motivation towards achieving objectives (MI-AO)	Related to personal factors where the athlete feels pleasure in the search of new abilities and moves in the practiced sport.
Intrinsic motivation to stimulating experiences (MI-EE)	Related to personal factors that made the athlete search for new stimulating experiences in said sport, which can cause excitement, pleasure, or leisure.
Extrinsic motivation towards external regulation (ME-RE)	Related to environmental factors link to rewards obtained for good performance, i.e.: trophies, money or even status with the coach or within a group.
Extrinsic motivation trough introjection (ME-I)	Internal pressures that the athlete may put himself through. Embarrassment or shame of being involved in situations where they fail or are unable to give full performance.
Extrinsic motivation of identification (ME-ID)	Associated with athletes that participated actively in sports, because they feel that practicing said sport helps them grow as a person.
Amotivation (AMO)	Is characterized by the feeling of despair where intrinsic or extrinsic motivations don't affect the overall performance; meaning that the athlete doesn't feel a reason to continue practicing said sport.

Sportive cooperation questionnaire SCQ-p.

The Sportive cooperation questionnaire in its Portuguese version (Almeida et al., 2013), also known as SCQ-p; is a 15 items scale designed to measure sportive team cooperation. It possesses a Cronbach alpha of 0.813. The items are answered in a Likert type scale ranging from 1 “Nothing” to 5 “A lot”. The scale is divided into 5 subscales, said subscales can be seen in detail in Table 4.

Table 4: *Subscales of the SCQ-p, adapted from Almeida et al., (2013).*

Subscale	Definition
Conditional cooperation (C-CON)	Rational and utilitarian conception derived from the internal decision making related to whether cooperate or not with team goals
Situational cooperation with the coach (C-COA)	Situational and environmental stimulus to cooperate or compete related to the coach
Unconditional cooperation (C-UNC)	Personal disposition to demonstrate cooperative behaviors without expecting to receive anything in return
Situational cooperation with team (C-TEA)	Situational and environmental stimulus to cooperate or compete related to other team members
Situational cooperation outside the playing field (C-OUT)	Situational and environmental stimulus to cooperate or compete outside of the playing field

Procedure

To determine the sample, we used the method of sampling by convenience (Saunders & Thornhill, 2012) in order to facilitate data collection and due to constraints regarding a significant sample size, the instruments were applied between the April and May of 2019. The administration of the questionnaires was face-to-face. Before applying the research protocol informed consent was signed by all participants (Appendix 1), in which the objectives as voluntary nature of participation, as well as subsequent use of data were explained. The research protocol was distributed on paper by a researcher and applied before the trainings.

Data Analysis

All data set was organized and analyzed using IBM SPSS Statistics® (version 25). At an early stage, besides descriptive statistics and internal consistency of the scales, normality of distribution was assessed. Several Spearman's correlate analyses were conducted to assess the relation between the studied variables.

The data analysis procedures carried out, in this investigation, are aligned with the objectives set beforehand. First a descriptive analysis was conducted to examine the frequencies, average scores and standard deviation. After that, and to observe how the variables interacted, the Spearman correlation analysis was applied between all variables. The significance level used were 0.05 and 0.01.

Results

The results from this investigation, will be presented in 2 parts. Based on the 2 objectives set beforehand for this analysis. First, the descriptive results are presented in the Descriptive analysis, for each of the applied tests; namely the Brief COPE, the Sportive motivation scale and the Sportive cooperation questionnaire. Second, the correlations between the studied variables is presented in the Correlation analysis.

Descriptive Analysis

Brief COPE Results

High scores of planning were registered in the Brief COPE application, followed by Self-blame and Active coping (with same mean) and Acceptance. On the other hand, it can be observed that the coping strategies involving Substance consumption, Religion and behavioral disinvestment aren't used frequently by (Figure 01).

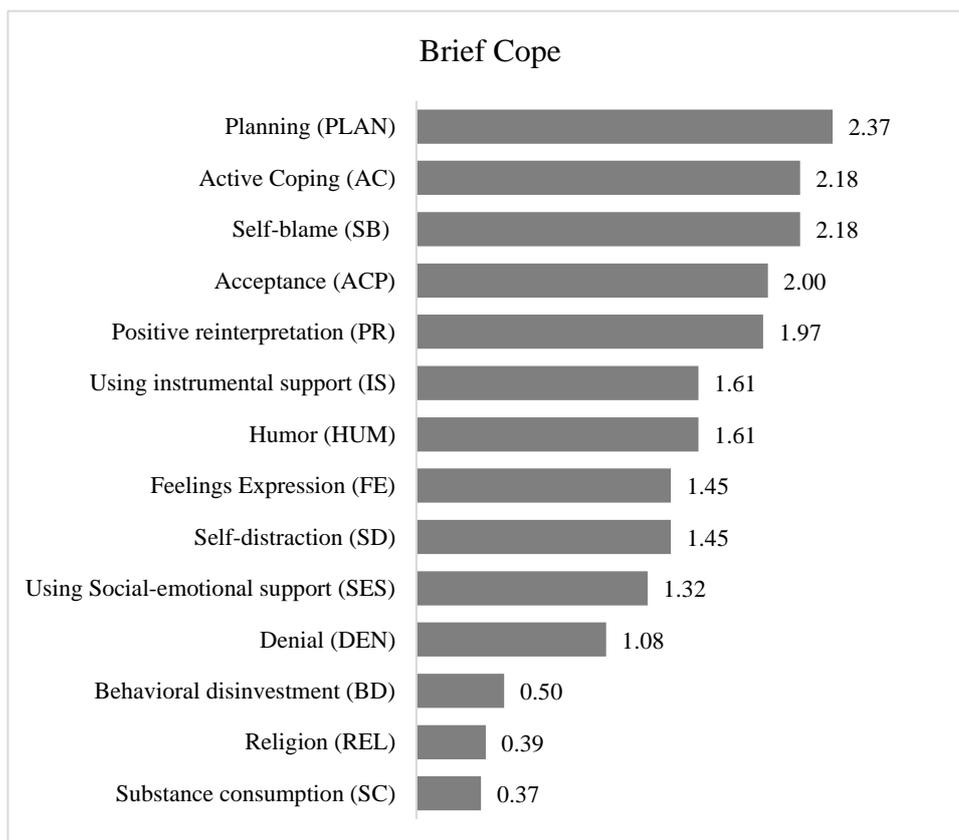


Figure 1: Brief Cope mean scores.

SMS-28 Results

Average scores between Intrinsic motivation ($M=21.438$) and Extrinsic motivation ($M=17.456$) show a tendency towards higher Intrinsic motivation in relation to extrinsic motivation and Amotivation. The Intrinsic motivation for stimulating experiences is the highest motivational subscale is the highest ranking, while Amotivation is the lowest ($M=12$).

It should be noted that while having a low comparative score, amotivation has a higher Standard deviation ($SD=6.316$) in comparison to other variables in this test. This data can be further examined in Figure 02.

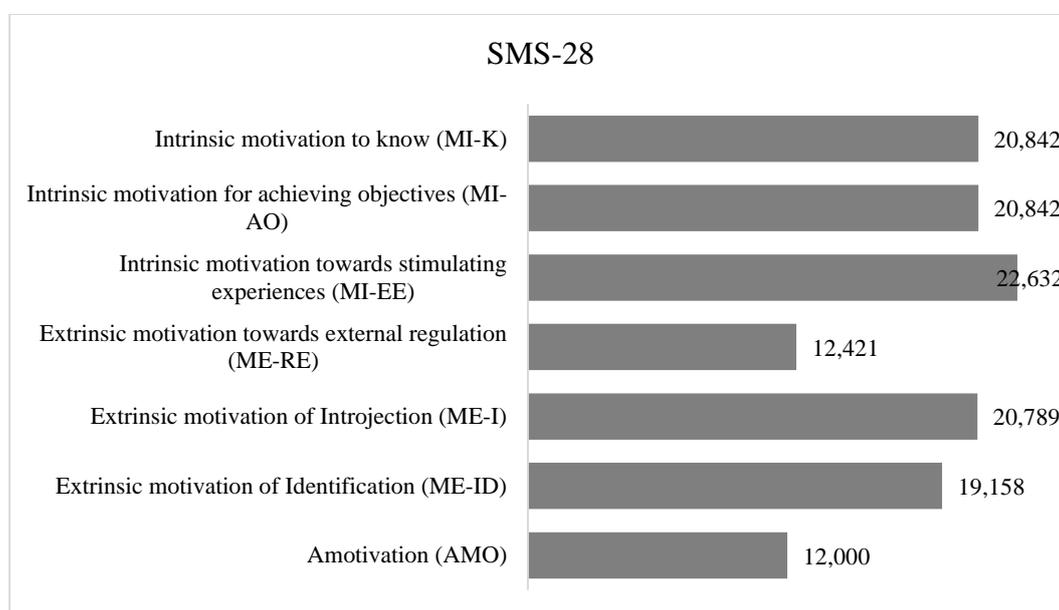


Figure 2: SMS 28 mean scores.

SCQ-p Results

Unconditioned cooperation showed higher scores ($M=4.234$) compared with Conditioned cooperation ($M=3.461$). Regarding situational cooperation: Cooperation with the team showed the highest score ($M=4.211$) followed by Cooperation with the coach ($M=4.035$) and cooperation outside the playing field ($M=4.026$). This data can be further examined in Figure 03.

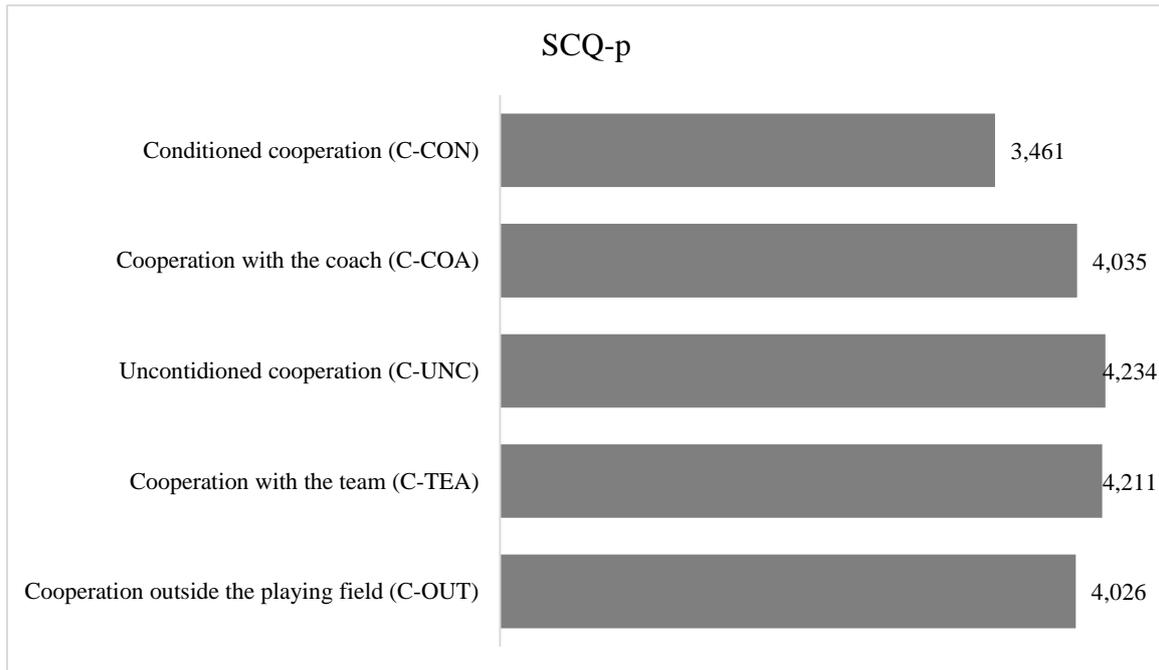


Figure 3: SCQ-p mean scores

Correlation Analysis

Many positive and negative correlations of significance were found between the studied variables; Those that were considered the most relevant or statistically significant are discussed in this topic.

Regarding sociodemographic variables; a negative correlation between age and the use of Self-blame as a coping strategy ($r_s = -.467$, $p < .05$) was found. Data also showed negative correlations between the years of practice and the intrinsic motivation to know ($r_s = -.532$, $p < .05$), the unconditional cooperation ($r_s = -.518$, $p < .05$) and the intrinsic motivation of stimulating experiences ($r_s = -.489$, $p < .05$). Days of practice per week show a negative correlation with behavioral disinvestment ($r_s = -.499$, $p < .05$); the participation in sportive events correlated with a higher intrinsic motivation to achieve objectives ($r_s = .560$, $p < .05$).

SMS-28 subscales showed many positive correlations and some negative correlations; The intrinsic motivation to know correlated with the intrinsic motivation for achieving objectives ($r_s = .803$, $p < .01$), and planning ($r_s = .577$, $p < .01$).

The intrinsic motivation for achieving objectives showed positive correlations with the intrinsic motivation for stimulating experiences ($r_s = .749$, $p < .01$), the extrinsic motivation of identification ($r_s = .657$, $p < .01$), planning ($r_s = .633$, $p < .01$), and acceptance ($r_s = .705$, $p < .01$).

The intrinsic motivation for stimulating experiences showed positive correlations with cooperation with the coach ($r_s = .614$, $p < .01$), unconditioned cooperation ($r_s = -.775$, $p < .01$),

and team cooperation ($r_s=.695$, $\rho<.01$), active coping ($r_s=.584$, $\rho<.01$), planning ($r_s=.676$, $\rho<.01$), acceptance ($r_s=.576$, $\rho<.01$). It also showed negative white substance consumption ($r_s=-.592$, $\rho<.01$). While the extrinsic motivation of External regulation showed positive correlations with amotivation ($r_s=.624$, $\rho<.01$).

The amotivation, a key variable to consider in this study, showed positive correlations with conditioned cooperation ($r_s=.470$, $\rho<.05$), Self-distraction ($r_s=.500$, $\rho<.05$) and behavioral disinvestment ($r_s=.506$, $\rho<.05$); while showing negative correlations with team cooperation ($r_s=-.492$, $\rho<.05$) and active coping ($r_s=-.507$, $\rho<.05$).

SCQ-p variables showed many positive correlations and some negative correlations; cooperation with the coach showed positive correlations with unconditioned cooperation ($r_s=.609$, $\rho<.01$), and acceptance ($r_s=.618$, $\rho<.01$). Unconditioned cooperation showed positive correlations with team cooperation ($r_s=.800$, $\rho<.01$), active coping ($r_s=.827$, $\rho<.01$) and planning ($r_s=.687$, $\rho<.01$); while showing a negative correlation with substance consumption ($r_s=-.622$, $\rho<.01$). Team cooperation showed positive correlations with active coping ($r_s=.877$, $\rho<.01$), and planning ($r_s=.653$, $\rho<.01$). While cooperation outside the playing field didn't correlate with any other variable measured in this team.

Brief COPE subscales showed several positive correlations and some negative ones; Active coping showed positive correlation with Planning ($r_s=.679$, $\rho<.01$); planning showed a positive correlation with instrumental support ($r_s=.493$, $\rho<.05$) and acceptance ($r_s=.585$, $\rho<.01$); while instrumental support showed positive correlations with acceptance ($r_s=.653$, $\rho<.01$). This information can be further examined in Table 5.

Table 5: Correlations part 1

		Age	Years of practice	Type of practice	Daily training	Events participation
Intrinsic motivation	know	-0,247	-,532*	0,214	0,201	0,251
	achieving objectives	0,012	-0,298	0,308	0,009	,560*
	stimulating experiences	-0,181	-,489*	0,142	0,243	0,33
Extrinsic motivation	external regulation	-0,126	0,069	0,391	-0,012	0,292
	trough introjection	0	-0,334	0,26	-0,209	0,394
	identification	0,008	-0,144	0,296	-0,024	0,241
	Amotivation	-0,362	0,02	0,19	-0,415	-0,061
Cooperation (Total)		-0,074	-0,321	0,153	-0,002	0,304
Conditional		0,036	0,164	0,275	-0,26	0,377
Unconditional		0,122	-0,435	-0,06	-0,144	0,249
with the coach		-0,245	-,518*	-0,191	0,3	0,179
with team		0,063	-0,348	-0,17	0,303	0,281
outside the playing field		0,007	-0,052	0,363	-0,041	-0,045
Coping	Active Coping	0,034	-0,383	-0,248	0,325	0,315
	Planning	-0,139	-0,445	-0,254	0,238	0,401
	Using instrumental support	0,287	-0,277	-0,108	-0,126	0,223
	Using Social-emotional support	0,054	-0,049	-0,3	-0,325	-0,165
	Religion	-0,142	0,061	0,172	-0,174	0,19
	Positive reinterpretation	0,235	-0,321	-0,055	-0,101	-0,103
	Self-blame	-,467*	-0,253	0,254	-0,042	0,072
	Acceptance	0,05	-0,436	0,281	-0,029	0,445
	Feelings Expression	0,117	-0,217	-,482*	-0,018	-0,311
	Denial	0,299	0,271	-0,324	0,019	0,061
	Self-distraction	0,099	0,145	0,012	-0,343	0,276
	Behavioral disinvestment	-0,174	0,129	0,29	-,499*	0,162
	Substance consumption	0,007	-0,021	-0,086	-0,014	-0,339
	Humor	-0,081	-0,11	0,401	-0,107	-0,056

* $\rho < 0.05$ ** $\rho < 0.01$

Table 5: correlations part 2

	AC	PLAN	IS	SES	REL	PR	SB	ACP	FE	DEN	SD	BD	SC	HUM	
Age	0,034	-0,139	0,287	0,054	-0,142	0,235	-,467*	0,05	0,117	0,299	0,099	-0,174	0,007	-0,081	
Years of practice	-0,383	-0,445	-0,277	-0,049	0,061	-0,321	-0,253	-0,436	-0,217	0,271	0,145	0,129	-0,021	-0,11	
Type of practice	-0,248	-0,254	-0,108	-0,3	0,172	-0,055	0,254	0,281	-,482*	-0,324	0,012	0,29	-0,086	0,401	
Daily training	0,325	0,238	-0,126	-0,325	-0,174	-0,101	-0,042	-0,029	-0,018	0,019	-0,343	-,499*	-0,014	-0,107	
Events participation	0,315	0,401	0,223	-0,165	0,19	-0,103	0,072	0,445	-0,311	0,061	0,276	0,162	-0,339	-0,056	
Intrinsic motivation	know	,523*	,577**	0,096	-0,322	-0,32	0,178	0,341	0,451	-0,147	-,465*	0,023	-0,369	-0,323	0,002
	achieving objectives	,527*	,633**	0,324	-0,221	-0,336	0,263	0,417	,705**	-0,273	-0,435	0,146	-0,175	-0,437	-0,066
	stimulating experiences	,584**	,676**	0,24	-0,355	-0,374	0,055	0,273	,576**	-0,361	-,541*	-0,148	-0,395	-,592**	-0,225
Extrinsic motivation	external regulation	-0,239	-0,072	0,03	-0,014	0,097	-0,016	,505*	0,192	-0,025	0,022	,528*	0,434	0,208	0,275
	tough introjection	0,013	-0,003	0,166	-0,187	-0,02	0,209	0,005	,587**	-0,266	-0,236	0,345	,470*	0,187	0,435
	identification	0,364	0,362	0,141	-0,258	-0,242	0,358	0,267	,474*	-0,308	-,502*	-0,176	-0,035	-0,405	0,229
	Amotivation	-,507*	-0,239	-0,099	0,218	0,125	-0,228	0,245	-0,066	0,027	0,052	,500*	,506*	0,324	0,076
Cooperation (Total)	,525*	0,325	0,264	-0,142	-,481*	0,036	0,236	,498*	-0,232	-,589**	-0,132	-0,223	-,534*	-0,04	
Conditional	-0,224	-0,112	0,137	-0,034	-0,374	-0,222	0,201	0,311	-0,287	-0,295	0,407	0,281	-0,16	0,153	
Unconditional	,827**	,687**	0,216	-0,215	-0,332	0,057	0,243	0,295	-0,015	-0,425	-0,332	-,553*	-,622**	-0,291	
with the coach	,572*	0,402	0,443	-0,051	-0,387	0,398	0,094	,618**	-0,134	-,456*	-0,023	-0,178	-0,396	0,032	
with team	,877**	,653**	0,237	-0,272	-0,409	0,262	0,123	,477*	-0,124	-0,421	-,474*	-0,354	-,513*	-0,163	
outside the playing field	0,13	-0,165	0,002	0,083	-0,207	-0,356	-0,1	-0,003	-0,085	-0,209	-0,334	-0,303	-0,312	-0,312	

* $\rho < 0.05$ ** $\rho < 0.01$

Table 5: correlations part 3

		(total)	Conditional	Unconditiona l	Cooperation with the coach	with team	outside the playing field
Intrinsic motivation	know	0,34	-0,111	0,317	,564*	0,417	0,051
	achieving objectives	,546*	0,192	,571*	,494*	,550*	0,085
	stimulating experiences	,635**	0,053	,614**	,775**	,695**	0,235
Extrinsic motivation	external regulation	0,036	0,406	-0,086	-0,277	-0,307	-0,193
	trough introjection	0,389	,505*	,515*	-0,068	0,081	-0,075
	identification	0,321	-0,029	0,402	0,269	,518*	-0,147
	Amotivation	0,026	,470*	-0,14	-0,339	-,492*	0,08
Cooperation (total)		1	,547*	,846**	,696**	,646**	,565*
Conditional			1	0,321	-0,07	-0,048	0,236
Unconditional				1	,609**	,663**	0,286
with the coach					1	,800**	0,319
with team						1	0,158
outside the playing field							1

* $\rho < 0.05$ ** $\rho < 0.01$

Discussion

An important element to consider is that despite the fact that Handball isn't considered a professional sport, some players identified themselves as professional players. Which may suggest a higher level of commitment from these members; this hypothesis wasn't explored due to small sample size (Only 4 players identified themselves as professional players).

Years of practice correlated negatively with intrinsic motivation to know, intrinsic motivation towards stimulating experiences and unconditioned cooperation. The relationship between these variables might be explained due to more years of practice result into an increased overall knowledge of the sport and the practices themselves being a stimulating experience on itself, that with time become repetitive thus causing the negative correlation. Which in turn causes the negative correlation with unconditioned cooperation, due to the influence these two variables (Intrinsic motivation to know and Intrinsic motivation towards stimulating experiences) possess over unconditioned cooperation. This hypothesis is supported by the findings of Balaguer et al. (2015) and the model proposed by Lazarus & Folkman (1984).

Regarding coping mechanisms, more adaptative coping mechanisms were observed (Planning, Active coping, acceptance and positive reinterpretation), but still the most used coping mechanism was maladaptive, namely self-blame. The adaptative coping mechanisms, namely Planning, Active coping and Acceptance; showed significant positive correlations with the intrinsic motivation variables (Intrinsic motivation to know, towards achieving objectives and to seek external stimulation). These variables also showed positive and significant correlations with unconditioned cooperation, cooperation with the coach and with the team. Altogether this data suggests a relationship where coping variables act as a source of influence in team dynamics and motivation, this hypothesis is supported by the coping theory proposed by Lazarus & Folkman (1984) where coping mechanisms act as a mediator of emotions; these mediation processes might in turn influence the disposition to cooperate and intrinsic motivation of the team members.

Overall the coping strategies used by this team seem to be desirable for the sportive practice with the exception of Self-blame. Self-blame showed a significant negative correlation with age and showed a significant positive relationship with Extrinsic motivation through external regulation, and in turn this variable showed a significant positive

correlation with Amotivation. A hypothesis might be constructed from this data: where players react to external events of failure and blame themselves, thus resulting in amotivation, which would explain the relationship between self-blame, Extrinsic motivation through external regulation and amotivation. This data is in line with the theoretical model proposed by Lazarus and Folkman (1984). While the negative correlation between self-blame and age might be a result of greater psychological maturity, but there's no data in this study to properly evaluate this specific hypothesis.

Regarding Motivation; the team showed medium to high levels of motivation and low levels of amotivation, which again are desirable traits in a team. Higher levels of intrinsic motivation were observed in comparison to Extrinsic motivation. Extrinsic motivation through external regulation showed a low score, which indicates that external events have a lower influence in overall motivation. The participation in sportive events correlation with intrinsic motivation towards achieving objectives suggest that having objectives to follow create motivation to work towards said objectives. These results are in line with the model proposed by Ames (1992) in the achievement goal theory.

Regarding cooperation, Unconditioned cooperation being higher than Conditioned cooperation is as a desirable trait in a team due to unconditioned cooperation being a tendency to cooperate no matter the circumstances. In this case Unconditioned cooperation correlated with Intrinsic motivation towards achieving objectives and Intrinsic motivation towards stimulating experiences; Cooperation with the coach and the team, Active coping and planning strategies. It also showed a negative correlation with behavioral disinvestment and substance consumption. Overall the unconditioned cooperation presented itself as a central and desirable variable in a team.

Cooperation with the coach and with the team both showed desirable correlations, especially with Intrinsic motivation variables; namely Intrinsic motivation towards achieving objectives and intrinsic motivation towards stimulating experiences. Cooperation with the coach also presented itself as a central variable in this team, correlating with unconditioned cooperation, team cooperation, active coping and acceptance.

An interesting find while analyzing the SCQ-p was the lack of relationship between the cooperation outside the playing field and other variables.

Conclusion

First thing to consider is that with the given the size and gender composition of the sample it's impossible to draw conclusions beyond the studied team, but nonetheless this result allows to make a profile of the motivational and cooperation levels, as well as the coping strategies employed by the 2° division handball team of the Feirense Sports club.

Regarding to the specific objectives of this study; it can be concluded that 1) There are medium to high levels of motivation in the 2° division handball team of the Feirense sports club, especially intrinsic motivation. 2) The main coping mechanisms present in this team are Planning, Active coping and Self-blame. 3) The predominant type of cooperation within the team is unconditioned. 4) Intrinsic motivation, Active coping, planning and unconditioned cooperation appeared as the main variables influencing the team. Another topic for future studies would be to explore the relationship between these variables and competitive performance.

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Appendix I: Consentimento Informado Adultos

No âmbito da realização do doutoramento do aluno Dr. Nery Borges, bem como dissertação de Mestrado do aluno José Oliveira, numa parceria entre o Clube Desportivo Feirense e Departamento de Educação e Psicologia da Universidade de Aveiro, está a ser realizado um estudo de investigação, com a temática “*Controlo da ansiedade como potencializador da experiência do fluxo na Performance*” e “*Efeito da Motivação na coesão de equipa e implicâncias para a prática desportiva e performance*”

Procedimento específico:

Este projeto compreende a avaliação preliminar em termos ansiedade de performance, motivação e coesão de equipas, bem como validação da *Escala de Estado de Fluxo*. O participante apenas tem que responder a alguns questionários, sendo a informação fornecida ou quaisquer dados recolhidos mantidos em confidencialidade e não serão associados a qualquer informação pessoal dos atletas ou Clube. Serão apenas utilizados para efeitos da presente investigação.

Risco para o participante

O estudo não apresenta qualquer risco para o participante.

Benefício para o participante

A sua participação contribuirá para aumentar os conhecimentos relativamente à performance desportiva e servirá de suporte para futuras investigações/ intervenções que visem potenciar a performance através da experiência do fluxo, fomentação de motivação e coesão.

Custo:

A sua participação não acarreta qualquer custo.

Natureza voluntária da participação

A participação é voluntária. Mesmo concordando em participar/ que o seu educando participe, poderá abandonar a qualquer momento, devendo para o efeito comunicá-lo ao investigador sem qualquer prejuízo ou penalização associada.

Informação de contacto:

Para esclarecimento de qualquer dúvida poderá contactar os investigadores Dr. Nery Borges (neryborges@hotmail.com; 912577294), Dr. José Oliveira (jos.manuel@ua.pt; 919515605), a investigadora Dr.ª Isabel Souto (isabel.souto@ua.pt; 910123357), bem como a orientadora (do aluno Nery Borges) Professora Doutora Helena Marinho (helena.marinho@ua.pt), orientadora (do aluno José Oliveira) Elisabeth Brito (ebrito@ua.pt) e a coorientadora e coordenadora do Professora Doutora Anabela Pereira (anabelapereira@ua.pt).

(Destacar aqui)

(Devolver esta secção)

EU _____, ATLETA DO ESCALÃO _____ DECLARO QUE FOI-ME DADA A OPORTUNIDADE DE LEITURA DESTE CONSENTIMENTO INFORMADO NO QUAL É EXPLICADO O PROCEDIMENTO DO ESTUDO MENCIONADO. FOI-ME INFORMADO O DIREITO A COLOCAR QUESTÕES ACERCA DO PROJETO, SENDO-ME FORNECIDO FORMA DE CONTACTO PARA ESSE FIM. ESTOU PREPARADO/A PARA PARTICIPAR NO PROJETO ACIMA DESCRITO.

(Assinatura do Atleta)

Data ___ / ___ / _____