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IMPACT OF A FAMILY-BASED PULMONARY REHABILITATION PROGRAM: AN EXPLORATORY STUDY

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Introduction: The World Health Organization has recommended family integration in rehabilitation interventions. Nevertheless, Pulmonary Rehabilitation (PR) programs for chronic obstructive pulmonary disease (COPD) remain focus on patients' needs, neglecting the role of the family.

Objective: This exploratory study assessed the impact of a family-based PR program in patients with COPD and respective family members.

Methods: Nine dyads of patients with COPD (70±8yrs; forced expiratory volume in one second 69±25% predicted) and family members (64±11yrs) enrolled in a 12-week family-based PR program with exercise training for patients and psychoeducation for patients and family members. Patients' quadriceps muscle strength was measured with the 10 repetition maximum and exercise tolerance with the 6-minute walking test. Patients and family members had their family coping assessed with the Family Crisis Oriented Personal Scales (higher scores indicate more positive coping) and adjustment to illness with the Psychosocial Adjustment to Illness Scale (higher scores indicate poorer adjustment).

Results: Significant improvements were observed in patients' quadriceps muscle strength (3.4±1.9 vs. 6.5±2.4Kg, p=0.002) and 6-minute walking distance (393.7±46.3 vs. 420.5±42.9m, p=0.023). Both patients and family members used more positive coping behaviors after the intervention (patients 91.3±15.1 vs. 105.4±14.2, p=0.026; family members 96.4±15.1 vs. 106.7±12.1, p=0.011). However, psychosocial adjustment did not change significantly (patients 31.9±19.5 vs. 27±12.4, p=0.178; family members 29.9±13.9 vs. 25.8±12.1, p=0.242).

Conclusions: PR programs inclusive of family members enhance the skills of the whole family to manage COPD, without interfering with the widely recognized patients' benefits in conventional programs. Further research with more robust designs is needed.

Descriptors: Chronic Obstructive Pulmonary Disease; family; pulmonary rehabilitation; community interventions; family coping.

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EFFECTS OF A RESPIRATORY PHYSIOTHERAPY SESSION IN PATIENTS WITH LOWER RESPIRATORY TRACT INFECTIONS

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Introduction: Patients with lower respiratory tract infections (LRTI – acute exacerbations of obstructive/restrictive diseases) experience severe dyspnea and increased sputum production (Woodhead, 2011). Respiratory physiotherapy (RP) has shown to improve these symptoms in chronic respiratory conditions (Garrod, 2007). However, studies exploring its effectiveness in patients with LRTI are lacking.

Objective: This study assessed the effectiveness of one session of RP in acute obstructive (AO) and acute restrictive (AR) respiratory patients.

Methods: RP included breathing retraining and airway clearance techniques. Data were collected pre/post session and included: peripheral oxygen saturation (SpO₂), patients' perceived dyspnea (modified Borg scale – MBS) and sputum (Breathlessness, Cough, and Sputum Scale-BCSS). Paired sample t-tests/Wilcoxon signed-rank tests were used to compare pre/post data. Results are presented as: mean±SD or median(interquartile-range).

Results: Thirty outpatients (14 male, 55.2±17.8yrs) diagnosed with AO (exacerbation of COPD, acute bronchitis and asthma; n=18) and AR (pneumonia; n=12) diseases were recruited. After the RP session, patients with AO diseases reported significantly more dyspnea (pre 0(2) vs. post 1.5(2.3); p=0.046) and less sputum (pre 3(1) vs. post 2(2); p=0.019). These parameters did not varied in AR (MBS: pre 1(2) vs. 1(2); p=0.684; BCSS: pre 2.5(1) vs. 2(1); p=0.317) patients. No significant changes were found for SpO₂ in both groups (AO: pre 96.1±2.1 vs. post 96.4±1.9; p=0.318; AR: pre 96.67±2.3 vs. post 96±3.8; p=0.382).

Conclusions: Patients with AO and AR diseases respond differently to RP. This may suggest the need to develop specific RP interventions for each group. Further research involving larger samples and robust measures are needed to confirm these findings.

Descriptors: respiratory physiotherapy; lower respiratory tract infections; monitoring; airway management.

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