

A PESSOA COM DOENÇA PULMONAR OBSTRUTIVA CRÓNICA: COMO PROMOVEM OS ENFERMEIROS DE REABILITAÇÃO O AUTOCUIDADO

THE PATIENT WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE: HOW REHABILITATION NURSES PROMOTE SELF-CARE

LA PERSONA CON ENFERMEDAD PULMONAR OBSTRUCTIVA CRÓNICA: COMO PROMUEVEN LOS ENFERMEROS DE REHABILITACIÓN EL AUTOCUIDADO

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RESUMO

Introdução: O aumento da prevalência das doenças crónicas como a Doença Pulmonar Obstrutiva Crónica (DPOC) tem um elevado impacto social e económico, compromete a saúde das pessoas e consequentemente a forma como gerem a doença e promovem o autocuidado.

Objetivos: Sistematizar intervenções de enfermagem de reabilitação promotoras do autocuidado na pessoa com DPOC.

Métodos: Este estudo consiste numa revisão sistemática da literatura. Para compreender e analisar este fenómeno foi utilizada a Teoria do Autocuidado de Orem.

Resultados: Os resultados salientaram que os programas de intervenção de enfermagem de reabilitação compostos por exercícios respiratórios, treino de exercício e uma forte componente educacional nomeadamente sobre o controlo dos sintomas e a gestão da terapêutica promovem o autocuidado, a autogestão e a autoeficácia.

Conclusões: O enfermeiro de reabilitação, no âmbito das suas competências, onde se destacam as estratégias educacionais, contribui para a gestão da condição de saúde destas pessoas.

Palavras-chaves: Autocuidado; DPOC; Enfermagem; Enfermeiro de Reabilitação

ABSTRACT

Introduction: The increased prevalence of chronic diseases such as Chronic Obstructive Pulmonary Disease (COPD) has a high social and economic impact, compromises patient's health and consequently the way they manage the disease and promote self-care.

Objectives: Systematize rehabilitation nursing interventions that promote self-care in the person with COPD.

Methods: This study consists of a systematic review of the literature. To understand and analyze this phenomenon, Orem's Theory of Self-Care was used.

Results: The results showed that nursing intervention programs, consisting of respiratory exercises, exercise training and a strong educational component, especially on symptom control and therapeutic management, promote self-care, self-management and self-efficacy.

Conclusions: Rehabilitation's nurses, with their competences, where the educational strategies are highlighted, contributes to the management of the health condition of these patients.

Keywords: Self-care; COPD; Nursing; Nursing Rehabilitation

RESUMEN

Introducción: El aumento de la prevalencia de las enfermedades crónicas como la enfermedad pulmonar obstructiva crónica (EPOC) tiene un alto impacto social y económico, compromete la salud de las personas y, consecuentemente, la forma en que gestionan la enfermedad y promueven el autocuidado.

Objetivos: sistematizar intervenciones de enfermería de rehabilitación promotoras del autocuidado en la persona con EPOC.

Métodos: Este estudio consiste en una revisión sistemática de la literatura. Para comprender y analizar este fenómeno se utilizó la Teoría del Autocuidado de Orem.

Resultados: Los resultados señalaron que los programas de intervención de enfermería compuestos por ejercicios respiratorios, entrenamiento de ejercicio y un fuerte componente educativo, sobre el control de los síntomas y la gestión de la terapia, promueven el autocuidado, la autogestión y la autoeficacia.

Conclusiones: El enfermero de rehabilitación, en el ámbito de sus competencias, donde se destacan las estrategias educativas, contribuye a la gestión de la condición de salud de estas personas.

Palabras Clave: Autocuidado; Enfermería; Enfermero de Rehabilitación; EPOC

INTRODUCTION

The demographical indicators in developed countries such as Portugal reveal a growing tendency in population ageing alongside the improvement of living conditions and the increase of chronic diseases. Due to the improvement of health systems, those can no longer be viewed as an isolated issue, there has been an increase of people with multiple pathologies of chronic character such as diabetes, cardiovascular diseases and diseases of the respiratory system such as Chronic Obstructive Pulmonary Disease (COPD) (World Health Organization, WHO, 2015).

Chronic illness is defined by the WHO (2015) as a long-life disease, with slow progress that includes a variable set of situations from heart disease, diabetes, asthma, COPD, but also oncological, mental and psychiatric diseases, diseases in the osteoarticular system and HIV/AIDS.

When it comes to COPD, it's estimated that around 328 million people from all around the world suffer from this chronic respiratory condition (Vos, et al., 2015) with higher prevalence in the males, as this is the fourth cause of death in the world and the fifth in Portugal (Instituto Nacional de Estatística, 2017).

COPD is defined by the Global Initiative for Chronic Obstructive Lung Disease (GOLD, 2017) as a preventable and treatable disease, characterized by persistent respiratory symptoms and airflow limitations which are the result of alveolar alterations and/or of the airways, caused by the significant exposure to particles or harmful gases. The first manifestations are especially in the pulmonary and respiratory functions (dyspnoea, wheezing, cough and increase of expectoration) with extrapulmonary manifestations that can arise throughout the progression of the disease. The primary complications are cardiovascular (swelling and thoracic pain), musculoskeletal (osteoporosis and decrease of muscular strength), hematologic (anaemia) and psychic and emotional (anxiety and depression) as well.

The diagnostic and prognostic are established on the basis of spirometry to determine the level of airway obstruction. Its classification is established independently of the obstruction level but based on the evaluation of symptoms and history of exacerbations/hospitalizations. (GOLD, 2017).

The treatment is mainly on pharmacological therapeutics, especially inhalation (bronchodilators and corticoids) and not pharmacological. Relating to the later the ones that stand out are the smoking cessation, vaccination and respiratory rehabilitation (GOLD, 2017). Respiratory rehabilitation is defined as a program of multidisciplinary therapeutic intervention in which the nurse, especially the rehabilitation nurse, has a crucial intervention. This is based in a global evaluation of the patient followed by individualized interventions that include functional respiratory re-education, training and education in order to improve the physical and psychological condition and further the adherence over time of healthy behaviour. Literature is unanimous when referring that respiratory rehabilitation in a person with COPD decreases its' symptoms, improves the muscular function of the limbs, the exercise ability, the emotional function, life quality, knowledge, self-efficacy and self-care (Direção Geral de Saúde, DGS, 2015).

In the view of chronic illnesses such as COPD, self-care has been identified as a resource for the promotion of health and management of the health-disease processes (Berbiglia & Banfield, 2014). Orem's Self-care model is based on the premise that individuals can take care of themselves and is defined as a human regulating function, discussed that is performed by the person or carer with the aim of maintaining life, health and well-being (Orem, 2001). The activities that one does in ones' favour are related to abilities, limitations, values and cultural and scientific rules of the person or of their agents. Every person can be considered a self-care agent, it can be the person itself when it's independent, or it can another such as a family member or a friend. When the person doesn't possess capacities to carry out self-care, it can also be called care reliant agent, in this situation, they can need the care from the part of nurses (Berbiglia & Banfield, 2014; Orem, 2001).

Orem (2001), defines the requirements of self-care as groups of individual needs that are divided in universal, development and diversion of health (Berbiglia & Banfield, 2014; Orem,2001). The universal requirements that are common to all human beings correspond to actions that provide the internal and external conditions that benefit human development. They are related with enough maintenance of air, water and food; appropriate processes of elimination; the balance between activity and rest and between solitude and social interaction; prevention of life risks, operation and well-being and development of the human being in social groups. When this occurs in an effective way, health and well-being are fostered (Silva, et al., 2009; Orem,2001).

The requirements of development appear from the need for adaptation to changes that appear in a person's life, throughout different stages or conditions that affect the person.

The requirements of health diversion are related to the frequency of diseases that affect the physiological and/or psychological mechanisms and the whole performance of the human being. When a permanent or temporary alteration occurs in the health condition and the person finds itself in a total or partial dependency in the satisfaction of its needs, it changes its' position as an agent of self-care to a patient, recipient of care (Orem,2001).

The type and the quality of the requirements to fulfil go through changes according to the basic conditioning factors such as age, gender, development stages, health state, social-cultural orientation, environmental factors, availability to resources and adaptation, family and health system and life pattern (Molina & Valenzuela, 2009; Orem,2001). Orem (2001) refers that there are barriers that make the fulfilment of self-care difficult such as physical limitations, lack of knowledge, financial constraints, worseness of symptoms and multiple problems with medication. When the standards of self-care are higher than its ability to respond, a self-care deficiency arises (Orem, 2001). In the view of the existence of said self-care deficiency, Orem (2001) proposes a Theory of Nursing Systems in which the author identified three classifications. This rests in the planning and execution of a series of actions with the aim that the person will reassume its' own care. When this is completely incapable of self-care and the intervention of nursing is needed to compensate entirely that incapability, it is used a completely compensatory system. When it can perform some self-care tasks but needs the nurse to compensate those that can't perform,

we are in front of a partially compensatory system. When one can perform or can learn how to perform self-care measures, we apply the aid-education system.

COPD, especially the symptoms associated with dyspnoea lead to the compromise of self-care and the person will need the intervention of a rehabilitation nurse in the area of different nursing systems. A study by Gysels & Higginson (2009) proved the effectiveness of an educational individualized plan in a nursing appointment of respiratory rehabilitation. This plan consisted of supplying personalized orientation according to the identified needs and known symptoms. This plan improved self-management of the disease, systematic control, decreased the exacerbation episodes and promoted self-care. Frequently the concept of self-care and self-management are confused. Self-management is considered as a self-care component, being the ability of the person to conjugate with the family and health professionals, to manage in an effective way the symptoms, treatments, physical, phycological, cultural and spiritual consequences. In self-management it is inherent the capacity of changing lifestyles in order to survive with chronic illness (Redman, 2007).

The study of Warwik, Gallagher, Chenoweth and Parbury (2009), concluded that self-management of symptoms promotes self-care and decreases hospitalizations and as such, nurses should encourage this behaviour in people with COPD. These authors determined the important prominence of the family in the development of self-care and in the disease's management.

Kasikçi (2010) stresses that besides the importance of functional respiratory reduction made by muscle respiratory exercises and relaxation, the educational lessons as information about the disease, the instructions about self-care and social support increase self-efficacy and the ability for self-care.

The scientific evidence stresses that nursing care should be oriented for the promotion of self-care abilities of the person, promoting its personal autonomy and empowerment. Empowerment is an attribution of groups or people created by knowledge and trust to act for their own benefit to reach their goals in the best way they can (Anderson & Funnell 2010). In view of the therapeutic needs of self-care, the nurse is the primary enabler, while experts (therapeutic agents) in the process of the diseases' management (Anderson & Funnell, 2010).

Disler et al. (2014) and GOLD (2017) are of the opinion that in view of the limitations that this disease causes in the daily life it's necessary a health system for family and social support, in order to maintain a stable health condition, performance and self-care. Taking care of these patients is, nowadays, a challenge for rehabilitation nursing that implements interventions with the aim to promote self-care.

In that way, the aim of this study is to systematize nursing interventions that promote self-care in a person with COPD.

1. METHODS

To achieve scientific evidence relating to the issue under study, it was performed a systematic revision of the literature. This methodology allows in an exploratory, structured and accurate way to compile nursing interventions that contributed to the practice based on the evidence (Higgins & Green, 2017). This type of revision responds to a raised question using systematic and explicit methods to identify, select and critically evaluate relevant researches (Clark, 2001).

To systematize the state of the knowledge about the interventions that promote self-care in the person with COPD and for a wider understanding of this phenomenon, it was performed a study that followed the methodologic principles of a systematic revision of the literature on the basis of the Cochrane Handbook orientations (Higgins & Green, 2017). This way, on the level of the creation of the question of the investigation as well as for the definition of the inclusion and exclusion criteria of primary studies, that affected the constitution of the sample, it was used the PI[C]O method (Cochrane, 2017) (Board 1). Starting from the analyses of the supposed theoretical, the following question was defined: Which nursing rehabilitation interventions (Intervention) promote self-care on the person with COPD (Population)?

Board 1. Adoption of the PI[C]O Method

P	Participant	Who was studied?	People with COPD	Key Words: COPD; Nursing; Rehabilitation Nurse; Self-care
I	Intervention	What was done?	Intervention of rehabilitation nursing	
C	Comparation	Can or not exist	-----	
O	Outcomes	Results/Effects or consequences	Promotion of self-care	

To obtain qualified data in view of the question of the investigation and the aim of the study, inclusion and exclusion criteria were established, which are presented in Board 2.

Board 2. Inclusion and Exclusion Criteria in the articles in study

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> • That refers to nursing interventions related to the promotion of self-care in the adult and elder with COPD; • With quantitative and qualitative methodology. 	<ul style="list-style-type: none"> • With unclear methodology; • Without correlation with the aim of the study; • Repeated in the different databases; • Not written in either English or Portuguese language; • Not available in the complete text; • With a previous date to 2008.

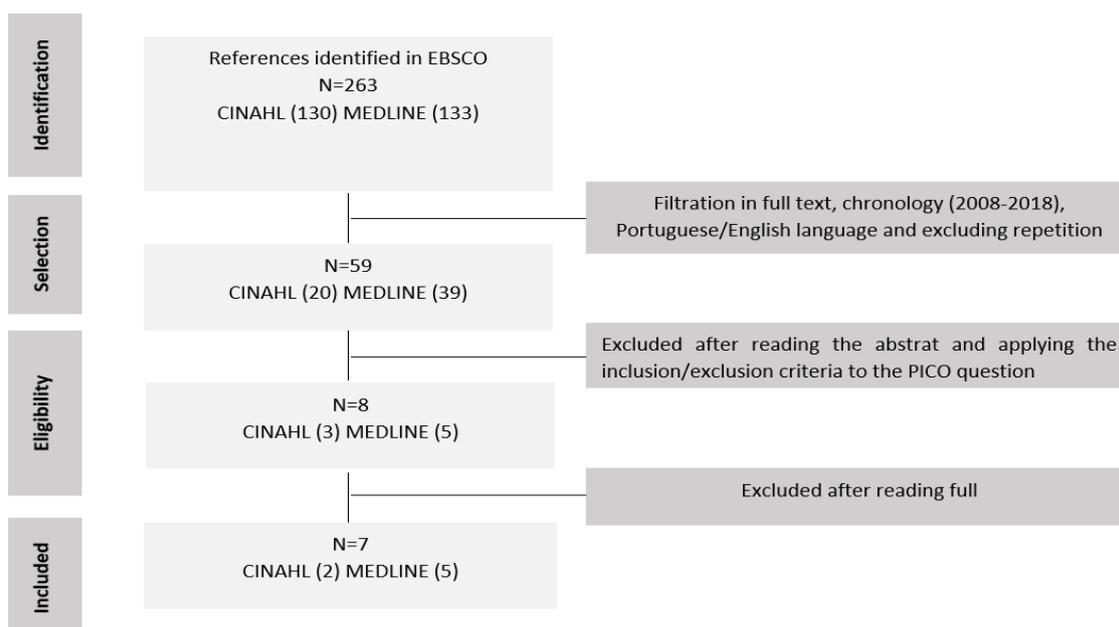
1.1 Strategy and Research

For the Identification and selection of studies to be included in the revision, the concepts referring to the participants, interventions and drawings were isolated of the intended studies as so to define a group of synonyms and terms related that, by intersection, would lead to the achievement of relevant results for the investigation.

Research with a basis in electronic data was conducted, in EBSCOhost Web in general, and in CINAHL (plus with full text) and in MEDLINE (plus with full text) in particular. The descriptors were removed of the MeSH Browser and the Boolean operators where used with the following orientation: [Nurs* AND (Lung Diseases, Obstructive OR Pulmonary Disease, Chronic Obstructive OR COPD) AND (Rehabilitation) AND (Self Care OR Activities of Daily Living) AND (Adult OR Aged OR Aged, 80 and over)].

The research was conducted in January 2018 and it was identified, in total, two hundred and sixty-three (263) articles. After the selection regarding the available articles in integral text, written in Portuguese or English, published in the last ten years and not repeated in both databases, two hundred and four (204) articles were excluded. From the result of this selection came out fifty-nine (59) articles which were analysed by two independent reviewers that applied the inclusion and exclusion criteria, and seven (7) studies were at last selected. These were evaluated on the level of evidence, using the orientations according to Melnyk e Fineout-Overholt (2015).

Of the selected articles, four are randomized studies controlled with evidence level II (Nguyen et al.,2008; Trappenburg et al.,2009; Titova, Steinshamn, Indredavik & Hentiksen,2015; Billington, Coster, Murrells & Norman, 2015), two are cohort studies with evidence level IV (Cosgrove, MacMahon, Bourbeau, Bradley & O'Neill, 2013; Isselt, Sruit, Groenewegen-Spkema, Chavannes & Achterberg,2014) and one qualitative descriptive study with evidence level VI (Casey, Murphy, Cooney, Mee & Dowling, 2011). The methodology is represented in Picture 1:

**Picture 1.** Selection method of the used research

2. RESULTS

The obtained results in the selected studies of the research are presented below (Board 3).

Board 3. Summary of the selected studies

Article	Type of study/ level of Efficiency	Intervention/ Reached Evidence
Randomized Controlled Trial of an Internet-Based Versus Face-to-Face Dyspnea Self-Management Program for Patients with Chronic Obstructive Pulmonary Disease: Pilot Study (Nguyen et al.,2008)	Randomized Controlled Study Evidence Level - II	Intervention: Implemented an educational program for self-management of dyspnoea in two groups of elderly patients with COPD. Both groups received education for health according to control strategies of dyspnoea, exercise plans of endurance and muscular enhancement. A group received in person intervention and reinforcement through the phone and, the other, online via the internet. Context: Patients in ambulatory enrolment through a clinic. Conclusions: Both groups revealed significant improvement after 6 months in self-efficacy in the management of dyspnoea and tolerance to the effort with the increase of the capacity in self-care.
Action Plan to enhance self-management and early detection of exacerbations in COPD patients; a multicenter RCT (Trappenburg et al.,2009)	Randomized Controlled Study Evidence Level - II	Intervention: Nursing assistance was provided to a group of patients with COPD following the COPD guidelines relating to the therapeutic optimization, education about inhaling therapy, motor and respiratory exercises, nutrition, smoking cessation and control of exacerbations. Another group received the intervention of an individualized plan with written and customized information according to their needs and description of the behaviours that were to be adopted according to the degree of aggravation of the symptoms. It was planned with the family member of reference preferential contacts and defined the health professionals to whom they could relay in case of worsening. Context: Patients in ambulatory enrolled through hospitals and clinics. Conclusion: It was proved that patients who used the individualized plan improved more significantly their self-care and self-management ability and identified the exacerbation signs earlier and turned on the systematic control measures learned and/or relayed to health aid.
Developing a structured education programme for clients with COPD - Clients' perceptions of self-management following a PRINCE (SEPRP) (Casey et al., 2011)	Qualitative – Descriptive Evidence Level - VI	Intervention: The intervention was implemented by nurses of primary health cares which consisted in education and practice of therapeutic management, control of breathing, knowledge and management and exacerbation of symptoms, and the recognition stress and anxiety. The intervention also included a program of motor and respiratory exercises. Context: Patients followed in primary health care. Conclusion: The program improved the ability to control the disease, mainly the systematic control of dyspnoea, the ability for therapeutic self-management also inciting the acquisition of abilities for self-care. The study revealed that nurses of primary health care play a crucial part in the promotion of self-management and self-care.
Facilitating education in pulmonary rehabilitation using the Living Well with COPD programme for pulmonary rehabilitation a process evaluation (Cosgrove et al., 2013)	Cohort study Evidence Level - IV	Intervention: The intervention consisted of adapting an educational program of self-management in patients with COPD in the area of the respiratory rehabilitation program. This consisted of the information about dyspnoea control, techniques for the conservation of energy, exacerbation management, inhaling, stress, anxiety or depression therapy and physical exercise. It was introduced other posteriori themes: oxygenation-therapy, unclogging of the airways, smoking cessation and healthy eating habits. Context: Patients followed in the hospital or health centres. Conclusion: The introduction of this educational program translated beyond satisfaction in rehabilitation sessions, in a better understanding of the disease and improvement in self-efficacy and self-management.
Geriatric rehabilitation for patients with advanced chronic obstructive pulmonary disease (Isselt et al.,2014)	Cohort Study Evidence Level - IV	Intervention: Rehabilitation program for elders with COPD which included respiratory exercises, the practice of endurance exercises and muscle strengthening, breathing control, huffing, relaxation techniques, nutritional evaluation and education to patients and families about self-management strategies of the disease. Context: Hospitalized patients with discharge after one exacerbation with COPD. Conclusion: The implementation of the program improved the respiratory functional capacity and the self-care capacity.
Long term effects of an integrated care intervention on hospital utilization in patients with severe COPD a single center controlled study (Titova et al., 2015)	Randomized Controlled Study Evidence Level - II	Intervention: Intervention of home integrated cares after hospital discharge through the phone to monetarize the symptoms, provide education about self-management about COPD through e-learning and individualized written plan about the control of symptoms and therapeutic management. Context: Hospitalized patients by exacerbation of COPD and after discharge received home visits for validation of the educational program. Conclusion: The patients who received this intervention noticed a lower rate of rehospitalization and reduction of the hospitalization period when this did indeed happen.
Evaluation of a Nurse-Led Educational Telephone Intervention to Support Self-Management of Patients with Chronic Obstructive Pulmonary Disease A Randomized Feasibility Study (Billington et al., 2015)	Randomized Controlled Study - II	Intervention: A group of patients received standard cares of a self-management program of COPD (recognition of symptoms, exacerbations, therapeutic management and use of health services). The intervention group, besides the self-management program, received two telephonic interventions where the contents of the self-management program were reinforced, and counselling was provided. The program lasted for 12 weeks. Context: Home context. Conclusion: The patients with telephone intervention reduced their symptoms compared to the control group.

3. DISCUSSION

From the analyses of the different articles, all emphasize that health education performed by EER nurses is an intervention that promotes self-care in a person with COPD. The authors consider that enabling these people for the management of their symptoms (Titova et al., 2015; Billington et al., 2015) is fundamental for the control of dyspnoea (Casey et al., 2011; Cosgrove et al., 2013; Nguyen et al., 2008). In this control, the education of conservation of energy stands out (Cosgrove et al., 2013). The bronchial toilette (Cosgrove et al., 2013; Isselt et al., 2014) is important to clean the airways, stressing the education of the huffing technique. These interventions can be associated to rest and relaxation techniques (Isselt et al., 2014), decreasing the muscular tension, stress and anxiety, making the performance of self-care activities easier, such as the maintenance of enough quantity of air and the balance between activity and rest (Orem, 2001).

The management of the therapeutic regime (Trappenburg et al., 2009; Casey et al., 2011; Titova et al., 2015; Billington et al., 2015) is a self-care promoting intervention that eases the management of the disease, decreasing the exacerbations. The inhaling-therapy and the oxygenation-therapy (when necessary) are fundamental components of the therapeutic regime for the systematic control and well-fare of these people (Cosgrove et al., 2013; Trappenburg et al., 2009). The identified interventions besides increasing the ability to perform self-care actions, present as an outcome the ability to perform the self-management of the disease (Ng & Smith, 2017).

Other educational interventions such as: smoking cessation (Trappenburg et al., 2009; Cosgrove et al., 2013); physical exercise (Nguyen et al., 2008) and eating habits (Isselt et al., 2014) were also emphasized as promoting interventions of self-care, as they are related with changes of behaviour as the motivation for the adoption of healthy lifestyles stands out.

Baker & Fatoye's (2017) study shows the positive effects of the self-management promoting interventions in the self-efficiency of people with COPD. Promoting self-efficiency contributes for the adoption of long-term health habits and in the person with COPD it's a predictor for the reduction of the psychosocial impact of the illness and the increase of well-fare and the quality of life (Baker & Fatoye, 2017).

Clari et al. (2017) and Efraimsson, Hillervik and Ehrenberg's (2008) studies determined that introducing educational programs about health brings out a higher motivation to adopt healthy lifestyles, mainly smoking cessation (Efraimsson et al., 2008). Areias et al. (2012) study proved that health education related to physical exercise promotes the well-fare of these patients.

Using informational technologies in the educational programs such as the phone (Nguyen et al., 2008) and the email (Nguyen et al., 2008; Titova et al., 2015; Billington et al., 2015) has a grand significance in the follow-up of the educational programs of health showing the reduction of exacerbations and re-hospitalizations (Titova et al., 2015).

For Casey et al. (2011) and Isselt et al. (2014), respiratory exercises and physical practice (endurance exercises and muscular strengthening) are essential interventions in a respiratory rehabilitation program and allow the improvement of the pulmonary function and the tolerance of physical activity. These improve the ability so the person can take hold of being their own self-care agent. When they don't possess this ability they become agents dependent on cares, relaying of the cares of family member/carer or nurses. Involving the family, especially in the educational area is beneficial to promote the adherence to the therapeutic regime (Isselt et al., 2014). In this sense, Kasikçi and Alberto (2007) demonstrated that there is a positive correlation between family support and the ability to perform self-care.

To sum up, we verified in the results of the studies that the intervention of the rehabilitation nurse includes predominantly the aid-education system. That way, respiratory exercises, physical training, management of symptoms help these patients/families in the fulfilment of the universal requirement of enough maintenance of air. The given orientations about adequate eating and hydration improve the satisfaction in the maintenance requirement of enough ingestion of food and liquids. The education of conservation of energy techniques, physical exercise and relaxation techniques improve the balance between loneliness and social interaction. The given orientations about anxiety and stress management and the importance of smoking cessation contribute to the prevention of dangers to life, performance and well-being.

Through the analyses of the studies, it was evidenced that the nurse, especially the rehabilitation nurse, provides cares in the sense of decreasing the effects of the self-care deficiency, enabling the person and promoting aid strategies and education with the aim to answer the patients self-care needs.

CONCLUSIONS

Self-care needs that are compromised in people with COPD can have repercussions in the satisfaction of different self-care requirements. In the intervention of the rehabilitation nurse, the important role it has as an educator and agent of change in the person and family stands out, in the sense of promoting and contributing in a more effective way to improve the self-efficacy and self-management of the chronic disease.

It is still stressed that the results of this revision are in line with the expertise of the rehabilitation nurse that foresee "taking care of the person with special needs throughout their life cycle", "enable the person with limitations in the activity and restrictions in social interaction" and "maximize their performance" (Ordem dos Enfermeiros, 2010). In view of the expertise of these nurses

and the different contexts in which a person can find itself, it has become clear the importance in the articulation between this hospitalization cares and primary health cares, relating to respiratory rehabilitation programs, making it easier for the person with COPD to reinsert itself if the family and social life after their hospital discharge. It will be pertinent to perform researches/studies in the future about the effectiveness of the continuation of rehabilitation nursing cares between these two contexts, with the aim to improve the practice of cares in this field.

Relative to the implications for the practise, this study fulfils not only the purpose of systematizing interventions that promote self-care in this people but also offers a reflective analysis in the light of the conceptual module of Orem about the intervention of the rehabilitation nurse.

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