Sigma's 29th International Nursing Research Congress

Needs' Assessment of Self-Management With Chronic Obstructive Pulmonary Disease

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Introduction: Chronic obstructive pulmonary disease (COPD) is a widespread chronic disorder among middle- and older-aged individuals. COPD is the third leading cause of morbidity and mortality worldwide and is ranked as the seventh leading cause of death in Taiwan. It is not a fully irreversible disease. Effective disease management should be aimed at supportive care and disease self-management. Disease self-management, which teaches patients the skills and behaviors needed to manage their disease successfully, is becoming increasingly important in the treatment of COPD. Most studies have focused on outcomes of COPD self-management programs; few have assessed patients' needs. Effective and satisfying patient education must include not only the content, which educators believe is necessary for disease self-management, but also the information the patient values and needs. Therefore, understanding the COPD patients' needs is an important issue for nursing care.

Purpose: This study's aim was to understand the needs and influential factors of self-management for COPD patients.

Methods: This study used a qualitative descriptive interview design. Participants with COPD of various severities were recruited by convenience sampling. Interview data were collected in the thoracic outpatient department and pulmonary rehabilitation room of a medical center in northern Taiwan. The first author conducted semi-structured, face-to-face interviews. We used the PRECEDE-PROCEED model to guide understanding the needs and influential factors of self-management behaviors for COPD participants. The interview began with general questions (e.g. "Could you describe your symptoms when you have an episode?"), followed by more specific questions (e.g. "Which factors may be an impediment when you exercise or perform daily activities?"). Miles and Huberman's method was used to analyze the data, which consists of three steps: data coding, data display, and drawing and verifying conclusions.

Results: A total of 20 patients with COPD, all male, participated in this study. The mean age was 75.70years (*SD* ± 5.75); most (95%) lived with their spouse or children and nearly 55% were self-care. All participants had a history of smoking; 75% no longer smoked. The mean time since diagnosis of COPD was nearly 82 months (*SD* ± 66.55). Severity of disease varied: 15% mild, 25% moderate, 30% severe and 5% very severe. There was no pulmonary function test for one participant either 6-months before or after the interview. Spirometer results were normal for 20% of participants (forced expiratory volume in 1 second/ forced vital capacity ≧ 0.70), a diagnosis of COPD by the doctors was confirmed by the presence of a history of smoking, presenting symptoms (e.g., dyspnea of exertion, chronic cough, sputum production etc.), exercise limitations, and physical assessment. Participants' perception of disease severity was 3.45 (*SD* ± 2.35; range 0-10).

Analysis of interview data resulted in nine themes, which described the needs of disease self-management: managing symptoms, managing medications, emotional adjustment, healthy eating, promoting sleep quality, maintaining a healthy life, quitting smoking, preventing catching a cold, and preventing falling. Three influential factors influenced the needs of self-management: predisposing factors, enabling factors, and reinforcing factors. Predisposing factors included patient knowledge about COPD, motivation of self-care, self-perception of disease severity and presence of other chronic diseases. Enabling factors included time required to travel to the hospital. Reinforcing factors included support (from family, friends, healthcare professionals) and self-perception of medical outcomes.

Conclusion: Our findings provide a better understanding of the needs and influential factors of self-management for COPD patients. Although a patient's perspectives of the needs for disease self-management may differ from healthcare professionals, the patient should be considered the expert in terms of what is important in their life. Thus, a patient-centred perspective calls for the investigation of self-management needs as a means for developing self-management programs targeted to the unique requirements of each patient, in order to enhance the quality of life for patients with COPD.

The PRECEDE-PROCEED model guided researchers to understand that many factors affected the selection of self-management behaviors for the participants with COPD, including disease-related knowledge about COPD, self-perception of disease severity and medical outcomes, and physical-psychological-social factors. Pulmonary rehabilitation has been shown to be the most effective therapeutic strategy to improve health status, activity tolerance, and quality of life. The mean age of participants in our study was 75.70, which is similar to other studies conducted on patients in Taiwan. Older patients with COPD in Taiwan are often more dependent on their caregiver or families when they travel to hospital to participate in rehabilitation, suggesting that families play a key role in motivating patients to attend healthcare programs. A patient-centred program of disease self-management should not only focus on patients' health problems and psychological distress, but also on educating family members about the benefits of self-management.

Title:
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Keywords:
chronic obstructive pulmonary disease, disease self-management and patient need

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Abstract Summary:
We expect the findings of this study will draw attendeesâ€ ™attention to the needs and influential factors of self-management for patients with COPD, as well as helping healthcare professionals understand the importance of educating family members and discussing the benefits of self-management.

Content Outline:
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1. **Introduction**
2. Burden of COPD
3. Benefits of disease self-management
4. Important issue of understanding the COPD patients' needs
5. Purpose of this study
6. **Methods**
7. Study design: qualitative descriptive interview design
8. Participants: COPD of various severities
9. Sampling: convenience sampling
10. Place of recruitment: thoracic outpatient department and pulmonary rehabilitation room from a medical center
11. Data analysis: Miles and Huberman's method was used to analyze the data, including data coding, data display, and drawing and verifying conclusions

III. Results

1. Distribution of socio-demographic characteristics and disease severity from 20 participants
2. The needs of disease self-management: managing symptoms, managing medications, emotional adjustment, healthy eating, promoting sleep quality, maintaining a healthy life, quitting smoking, preventing catching a cold and preventing falling
3. The influential factors of disease self-management: predisposing factors (patient knowledge about COPD, motivation of self-care, self-perception of disease severity and other chronic disease), enabling factors (time needed to travel to the hospital) and reinforcing factors (support from family, friends and healthcare professional and self-perception the medical outcomes)
4. **Conclusions**
5. Patient's perspective of the needs of disease self-management is different from healthcare professionals.
6. PRECEDE-PROCEED model guided healthcare professionals to understand influential factors of self-management for COPD patients.
7. Disease self-management program should not only focus on patients' health status and psychological problems, but also on the motivation of family members who are involved in the program.

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Research projects are going now: 1.Effects of a Disease Self-Management Program on Quality of Life and Related Factors among Patients with Chronic Obstructive Pulmonary Disease; 2.Effects of Skin Care Self-Management on Quality of Life in Advanced Non-Small Cell Lung Cancer Patients with Skin Toxicity during Targeted Therapy: A Longitudinal Study
Author Summary: My clinical experience is major in respiratory care, critical care, and disease self-management. Study trend focus on quality of life for patient with COPD and extracorporeal membrane oxygenation patients following hospital discharge.

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Author Summary: Clinical experience focus on critical care for patient with respiratory disease. Research topic related to "The Relationship between Self-Management Behaviors and Quality of Life in Patients with Chronic Obstructive Pulmonary Disease".