

# The Effect of Psychosocial Nursing on Elderly Patients with Chronic Obstructive Pulmonary Disease

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**Abstract:** *Objective:* To explore the clinical effect of psychosocial nursing in elderly patients with chronic obstructive pulmonary disease (COPD). *Methods:* The sample of this study included 100 elderly patients with COPD who were admitted to our hospital from January 2021 to June 2023. They were divided into a research group ( $n = 50$ ) and a control group ( $n = 50$ ). The patients in the two groups received essential nursing intervention, and those in the study group received psychological nursing intervention along with it. The Hamilton Anxiety Rating Scale (HAM-A), Hamilton Depression Rating Scale (HAM-D), quality of life score, and nursing satisfaction of the two groups were compared. *Results:* After the nursing intervention, the HAM-A score and HAM-D score of the research group were lower than those of the control group ( $P < 0.05$ ), and the quality-of-life score and the nursing satisfaction of the research group were higher than that of the control group ( $P < 0.05$ ). *Conclusion:* Psychosocial nursing for elderly patients with chronic obstructive pulmonary disease can enhance their emotional well-being, quality of life, and satisfaction with nursing care, demonstrating its potential for broader application and adoption.

**Keywords:** Psychosocial nursing; Chronic obstructive pulmonary disease; Negative emotion; Nursing satisfaction

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## 1. Introduction

Chronic obstructive pulmonary disease (COPD) is a typical chronic disease of the airway, which can be caused by personal or environmental factors. COPD is characterized by airway obstruction and airflow limitation. The main clinical symptoms of the patient are chronic cough, shortness of breath, dyspnea, chest tightness, and wheezing, and many more<sup>[1]</sup>. The usual treatment method for COPD includes drugs and respiratory support. To improve the patients' compliance with the treatment program, it is necessary to include nursing intervention. Clinical studies have shown that elderly patients with COPD are often accompanied by negative emotions such as depression and anxiety. Destructive emotions are detrimental to the patients' physical and mental health. Psychosocial care can improve the mental state of patients and help improve the efficacy of the treatment<sup>[2,3]</sup>. In this study, 100 elderly COPD patients were selected to explore the effect of psychosocial nursing.

## 2. Materials and methods

### 2.1. General information

The sample of this study included 100 elderly patients with COPD who were admitted to our hospital from January 2021 to June 2023. They were divided into a research group ( $n = 50$ ) and a control group ( $n = 50$ ). The research group comprised 28 males and 22 females, with ages ranging from 59 to 77 years (mean age  $68.72 \pm 4.55$  years) and disease durations spanning 2 to 6 years (mean duration  $4.33 \pm 1.02$  years). In the control group, there were 27 males and 23 females, with ages ranging from 61 to 75 years (mean age  $68.69 \pm 4.62$  years) and disease durations ranging from 1 to 6 years (mean duration  $4.38 \pm 1.07$  years). No significant differences were observed in the general data between the two groups ( $P > 0.05$ ).

Inclusion criteria: (1) Diagnosed with COPD according to the “Guidelines for the Diagnosis and Treatment of COPD,” (2) no other lung diseases, (3) signed an informed consent.

Exclusion criteria: (1) Complicated with organic diseases of body tissues or organ dysfunctions, (2) unstable vital signs, (3) non-compliant

### 2.2. Methods

Both groups received standard nursing care. The nurses monitored vital signs, administered prescribed medications, and provided respiratory support as needed. Once the patients’ conditions stabilized, they conducted health education, dietary guidance, assisted with rehabilitation training, and provided post-discharge life advice.

Patients in the research group were given psychosocial nursing. (1) Analysis of the patients’ psychological problems: The nursing staff consulted the clinical data of patients, actively communicated with them, and identified their psychological problems, including depression, pessimism, disappointment, anxiety, fear, depression, and so on; intervention measures were then formulated based on the patients’ psychological problems. (2) Health education: Because the COPD patients in our hospital were predominantly elderly individuals with limited comprehension and memory, nurses distributed custom-made COPD educational materials and provided face-to-face explanations about the disease. They were patient, slowed down their speech when necessary, and conveyed essential information about COPD, including its causes, typical symptoms, predisposing factors, and preventive measures such as maintaining clean indoor air, reducing the risk of respiratory infections, and engaging in regular exercise. During the health education sessions, nurses assessed patients’ comprehension, addressed their questions, and increased the frequency of education as needed to enhance its effectiveness. (3) Improvement of the treatment environment: daily cleaning routines were employed to ensure fresh air in the ward. The ward’s layout was customized according to each patient’s hobbies and educational level, featuring amenities such as books, newspapers, green plants, and more. Warm pictures and slogans adorned the walls, and soft, soothing music was played within the ward to create a calming atmosphere. Additionally, the medical and daily service needs of patients were met promptly. (4) Individualized psychological intervention: A family-oriented service concept was established, allowing patients to spend more time with the nurses, and the patients were guided to express their psychological concerns proactively. Individualized psychological interventions were carried out based on the psychological issues of each patient. Patients who had experienced depression, pessimism, disappointment, and concerns about the treatment’s effectiveness were introduced to successful treatment cases, and they were informed about the doctors’ extensive clinical experience. Besides, the patients were reassured about the positive effects of the treatment drugs and the importance of adopting healthy lifestyle habits to reduce the risk of disease recurrence. Those struggling with anxiety and fear received support through techniques like playing soothing music, guiding deep breathing exercises, and providing body massages to induce relaxation and redirect their focus from the disease. For patients grappling with depression, their family members were educated on participating in psychological

care, offering invaluable psychological support to the patients.

### 2.3. Evaluation criteria

(1) The Hamilton Anxiety Rating Scale (HAM-A) and Hamilton Depression Rating Scale (HAM-D) of the patients were recorded before nursing and after one week of nursing, ranging from 0–56 points. The higher the score, the more severe the anxiety and depression. (2) The quality-of-life scores of the two groups before nursing and after one week of nursing were compared. The quality of life of the patients was scored using the Short Form Survey (SF-36). The items in the survey were physiological functions, psychological functions, and overall health, with a total score of 100 for each item; the higher the score, the higher the quality of life. (3) A self-made nursing satisfaction questionnaire was used to evaluate the nursing satisfaction of the patients. The items in the questionnaire included service attitude, health education, and nursing process; the options for the items were “satisfied” and “dissatisfied.”

### 2.4. Statistical analysis

SPSS 23.0 was employed to analyze the research data. For measurement data (represented as mean  $\pm$  standard deviation), a *t*-test was conducted, while count data (represented as percentages) was analyzed using the  $\chi^2$  test, with  $P < 0.05$  indicating statistical significance.

## 3. Result

### 3.1. HAM-A and HAM-D scores

After one week of nursing care, the HAM-A score and HAM-D score of the study group were lower than those of the control group ( $P < 0.05$ ), as shown in **Table 1**.

**Table 1.** Comparison of HAM-A scores and HAM-D scores between the two groups (mean  $\pm$  standard deviation)

Group	HAM-A score		HAM-D score	
	Before nursing	After nursing	Before nursing	After nursing
Research group ( $n = 50$ )	38.92 $\pm$ 3.77	20.18 $\pm$ 1.96	36.77 $\pm$ 3.94	21.07 $\pm$ 2.04
Control group ( $n = 50$ )	39.86 $\pm$ 3.69	27.95 $\pm$ 2.85	36.65 $\pm$ 3.88	28.19 $\pm$ 2.95
<i>t</i>	1.260	15.884	0.153	14.037
<i>P</i>	0.211	0.000	0.878	0.000

### 3.2. Quality-of-life scores

**Table 2** shows that the quality-of-life score of the study group was higher than that of the control group after one week of nursing care ( $P < 0.05$ ).

**Table 2.** Comparison of quality-of-life scores between the two groups (mean  $\pm$  standard deviation)

Group	Physiological function		Psychological function		General health	
	Before nursing	After nursing	Before nursing	After nursing	Before nursing	After nursing
Research group ( $n = 50$ )	58.94 $\pm$ 3.62	81.25 $\pm$ 4.59	58.91 $\pm$ 3.61	82.44 $\pm$ 4.63	60.12 $\pm$ 3.06	81.25 $\pm$ 4.97
Control group ( $n = 50$ )	59.02 $\pm$ 3.57	72.86 $\pm$ 2.75	58.86 $\pm$ 3.55	71.95 $\pm$ 2.84	60.08 $\pm$ 3.11	73.08 $\pm$ 2.75
<i>t</i>	0.111	11.087	0.070	13.656	0.065	10.171
<i>P</i>	0.912	0.000	0.944	0.000	0.000	0.000

### 3.3. Nursing satisfaction

Table 3 shows that the nursing satisfaction of the research group was higher than that of the control group ( $P < 0.05$ ).

Table 3. Comparison of nursing satisfaction between the two groups ( $n$  [%])

Group	Service attitude	Health education	Nursing process
Research group ( $n = 50$ )	48 (96.0)	46 (92.0)	46 (92.0)
Control group ( $n = 50$ )	41 (82.0)	38 (76.0)	39 (78.0)
$\chi^2$	5.005	4.761	3.843
$P$	0.025	0.029	0.049

## 4. Discussion

Epidemiological survey data show that the incidence rate of COPD among people over 40 years old in China is about 13%, making it one of the primary chronic diseases in this country<sup>[4]</sup>. Thankfully, COPD is preventable. The feature of this disease is persistent airflow limitation, which can lead to symptoms such as cough and sputum, dyspnea, chest tightness, and wheezing. Respiratory support, drug intervention, and other programs are often used in the clinical treatment of COPD, and nursing intervention is required during treatment to improve the curative effect<sup>[5,6]</sup>.

Primary COPD nursing care focuses on condition observation and following the doctor's orders. However, it is less comprehensive and not tailored to the patient's condition<sup>[7]</sup>. Psychosocial nursing takes into account biological, social, and psychological factors. It involves the implementation of humanistic care, a detailed analysis of patients' psychological concerns, and the provision of health guidance and psychological counseling. Through effective communication and comprehensive psychological intervention, it is possible to enhance patients' understanding of COPD and their overall emotional well-being. This, in turn, enables patients to collaborate effectively, maintain a positive psychological state during treatment, manage stress responses, and ultimately improve their physical health. Such an approach contributes to enhancing the overall effectiveness of disease treatment<sup>[8,9]</sup>.

This study showed that after the nursing intervention, the HAM-A and HAM-D scores of the patients in the research group were lower than those in the control group, suggesting that psychological nursing can reduce patients' negative emotions. Patients with COPD often experience negative emotions due to various factors, including recurring attacks and the financial burden of treatment. Unfortunately, in primary nursing care, nurses sometimes do not adequately address the psychological well-being of patients or implement specific interventions to alleviate these negative emotions effectively<sup>[10]</sup>. In psychosocial nursing, the nurses analyze patients' psychological issues, engaged in effective communication using both psychological and nursing techniques, and offered targeted psychological interventions. Therefore, negative emotions in patients were effectively alleviated<sup>[11]</sup>. This study showed that after the nursing intervention, the quality-of-life score of the research group was higher than that of the control group, suggesting that psychosocial nursing can improve the quality of life of COPD patients. This is because psychosocial nursing complements conventional nursing in a way that patients can establish confidence in the treatment. The patients were guided to cooperate with the treatment program, thus producing better outcomes and improving their quality of life<sup>[12,13]</sup>. The study found that psychosocial nursing led to higher nursing satisfaction among COPD patients. This increase in satisfaction is due to various factors, including family-oriented nursing, effective emotional support, timely issue resolution,

and patient and family involvement in interventions, which collectively improve patients' physical and mental well-being. Therefore, patients were more satisfied with nursing services <sup>[14,15]</sup>.

## 5. Conclusion

In conclusion, psychosocial nursing for elderly patients with COPD has the potential to enhance emotional well-being, improve their quality of life, and increase nursing satisfaction. Nevertheless, this study's limitations include a small sample size and the absence of a multi-center data comparison. Thus, further research is necessary to refine psychological nursing plans for elderly COPD patients.

## Disclosure statement

The author declares no conflict of interest.

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