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Study on the Impact of Continuing Care on Self-Care Ability and Quality of Life in COPD Patients

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Abstract: *Objective:* To explore the significance of continuing care in improving self-care ability and quality of life in patients with chronic obstructive pulmonary disease (COPD). *Methods:* A total of 60 COPD patients treated in our department between June 2023 and June 2024 were randomly divided into control and observation groups. The control group received routine care, while the observation group received additional continuing care. Self-care ability and quality of life were compared between the two groups. *Results:* After the intervention, the observation group demonstrated higher self-care ability and quality of life scores compared to the control group ($P < 0.05$). *Conclusion:* Continuing care for COPD patients has a positive impact on enhancing self-care ability and improving quality of life, making it worth recommending.

Keywords: Chronic obstructive pulmonary disease; Continuing care; Self-care ability; Quality of life

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1. Introduction

Chronic obstructive pulmonary disease (COPD) is a common chronic respiratory disease characterized by symptoms such as dyspnea, chest tightness, and coughing, with a tendency for recurrent episodes that severely impact patients' daily lives. Reports indicate that the prevalence of COPD in China is 8.2%, with a higher incidence in individuals over 40 years of age [1]. The disease not only affects physical health but also interferes with daily functioning.

Current clinical treatment for COPD primarily focuses on symptomatic interventions. However, due to the chronic nature and high recurrence rate of the disease, continuous treatment and out-of-hospital care are essential. Surveys suggest that over 70% of COPD patients in China express a need for continuing care [2], which has been shown to promote healthy behaviors and reduce rehospitalization rates.

Based on these findings, this study aims to further understand the significance of continuing care in improving self-care ability and quality of life in COPD patients.

2. Materials and methods

2.1. General information

The study included 60 COPD patients treated between June 2023 and June 2024. Patients were randomly divided into a control group (30 patients) and an observation group (30 patients). In the control group, there were 19 males and 11 females, aged 49–76 years, with an average age of 66.25 ± 6.25 years. The duration of illness ranged from 10 months to 10 years, averaging 5.26 ± 3.15 years. In the observation group, there were 17 males and 13 females, aged 48–78 years, with an average age of 67.045 ± 6.99 years. The duration of illness ranged from 5 months to 11 years, averaging 5.96 ± 2.38 years. Statistical analysis showed no significant differences in baseline characteristics such as age and gender composition between the two groups ($P > 0.05$).

Inclusion criteria: Diagnoses met the standards of the "Guidelines for the Diagnosis and Treatment of Chronic Obstructive Pulmonary Disease (2021 Revision)" [3]. Patients were in a stable phase of the disease, had clear consciousness, could communicate normally, and consented to participate in the study.

Exclusion criteria: Patients with other severe respiratory diseases, malignancies, or severe illnesses; patients unable to perform daily activities independently; or patients with poor overall health status.

2.2. Methods

Both groups received identical treatment and care during hospitalization, including respiratory function exercises, dietary guidance, psychological support, and medication guidance.

Control group: Upon discharge, patients received routine guidance, such as instructions on diet, medication, rehabilitation training, and reminders to return for follow-up visits when feeling unwell. Monthly telephone follow-ups were conducted to assess their condition and provide health guidance, as well as to answer patient questions.

Observation group: In addition to the guidance provided to the control group, patients received continuing care interventions, which included:

(1) Establishment of a specialized care team: A COPD-specific continuing care team comprising an attending physician, head nurse, and primary nurse was formed to handle post-discharge follow-ups and health guidance.

(2) Patient condition assessment: Upon discharge, the team reviewed patients' medical records, assessed their current condition and risk factors, and developed personalized post-discharge care plans.

(3) Implementation of continuing care:

(a) Patients were provided with follow-up and health education manuals upon discharge and enrolled in a continuing care WeChat group along with their family members.

(b) The primary nurse regularly shared videos, text, or images in the group to help patients understand their disease, self-care measures, and precautions. The nurse also responded to patient queries. Educational content included disease mechanisms, medication, dietary guidance, activity recommendations, rehabilitation exercises, and psychological support.

(c) The group featured a daily check-in initiative where patients recorded their rehabilitation exercises and uploaded videos to foster healthy habits [4]. Patients were encouraged to share self-care experiences and support one another within the group.

(d) Monthly health lectures by COPD experts were organized to enhance patients' and families' understanding of the disease and self-care strategies.

(e) Each patient received at least one home visit to evaluate their living environment and daily habits, with tailored suggestions for improvement. The care team also provided psychological support and helped patients build confidence in their treatment.

2.3. Observation indicators

(1) Self-care ability: Evaluated using the Exercise of Self-Care Agency (ESCA) scale, where higher scores indicated better self-care ability.

(2) Quality of life: Assessed using the Short Form-36 (SF-36) Health Survey, which evaluates dimensions such as general health, physical function, mental health, and social function. Each dimension has a total score of 100, with higher scores indicating better quality of life.

2.4. Statistical analysis

Data analysis was conducted using SPSS 24.0 statistical software. Continuous and categorical data were analyzed using *t*-tests and chi-squared tests, respectively. Differences were considered statistically significant at $P < 0.05$.

3. Results

3.1. Self-care ability

Before the intervention, the ESCA scale scores of both groups were similar, indicating comparable self-care abilities. Post-intervention, the ESCA scores improved in both groups, but the observation group showed significantly higher scores than the control group ($P < 0.05$), suggesting superior self-care ability. Results are shown in **Table 1**.

Table 1. Comparison of ESCA scale scores before and after nursing intervention (mean ± SD, points)

Group	n	Health knowledge level		General self-care needs		Total self-care ability score	
		Before	After	Before	After	Before	After
Observation	30	32.20 ± 2.10	44.25 ± 3.95	35.23 ± 3.20	46.69 ± 3.75	65.26 ± 4.12	93.36 ± 10.12
Control	30	32.98 ± 2.25	41.01 ± 3.22	35.96 ± 3.74	43.23 ± 3.93	66.69 ± 4.55	84.22 ± 10.33
t-value		0.714	6.301	0.695	6.334	0.749	10.001
P-value		> 0.05	< 0.05	> 0.05	< 0.05	> 0.05	< 0.05

3.2. Quality of life

Before the intervention, the SF-36 scores of both groups were similar. Post-intervention, scores increased in both groups, with the observation group showing significantly higher scores than the control group ($P < 0.05$), indicating better quality of life. Results are shown in **Table 2**.

Table 2. Comparison of SF-36 scale scores before and after nursing intervention (mean ± SD, points)

Group	n	General health		Physical health		Psychological function		Social function	
		Before	After	Before	After	Before	After	Before	After
Observation	30	68.23 ± 10.12	88.89 ± 5.29	70.12 ± 6.60	87.89 ± 5.16	70.13 ± 6.26	90.12 ± 7.11	67.26 ± 3.23	87.59 ± 10.01
Control	30	68.13 ± 10.23	83.23 ± 5.89	71.12 ± 6.96	81.43 ± 6.05	70.33 ± 6.21	85.21 ± 5.55	67.56 ± 2.34	87.15 ± 5.58
t-value		0.029	2.892	0.498	6.993	0.165	2.950	0.024	6.540
P-value		> 0.05	< 0.05	> 0.05	< 0.05	> 0.05	< 0.05	> 0.05	< 0.05

4. Discussion

COPD is a complex condition characterized by a prolonged disease course and frequent complications, which significantly impact patients' normal lives and drain financial and material resources. During treatment, some patients may also experience negative emotions such as anxiety and depression. For patients in the stable phase of COPD, the focus should not only be on controlling infections and improving lung function but also on enhancing self-management abilities and improving quality of life. Traditional nursing care often emphasizes in-hospital care while neglecting post-discharge support, leading to high readmission rates and hindering recovery. This highlights the need to explore more effective nursing models.

Continuity of care, initially promoted by the Geriatric Nursing Association, is an open and extended nursing model implemented post-discharge. It ensures systematic and professional care from hospital to home [7]. Since COPD predominantly affects middle-aged and elderly patients, factors such as advanced age and lower education levels may hinder adherence to health guidance provided during hospitalization [8]. Conventional discharge guidance and telephone follow-ups are often insufficient to meet patients' needs. Continuity of care addresses these issues by centering on the patient and utilizing modern electronic information tools, home visits, and educational sessions. This approach ensures that disease-related knowledge is repeatedly conveyed, helping patients better understand and manage their conditions [9].

In this study, the observation group received continuity of care interventions. Beyond providing health guidance at discharge, patients were given health knowledge manuals for reference and comparison with their conditions. Patient records were established to enable more targeted follow-ups. Through the creation of a WeChat group, patients received health education regularly and exchanged self-care experiences with peers. Healthcare professionals conducted home visits to assess living environments and provide tailored guidance. Following these interventions, the observation group demonstrated significantly better self-care abilities than the control group. This improvement can be attributed to the continuous health education received and the correction of unhealthy habits with professional assistance, leading to enhanced self-management.

The observation group also reported a better quality of life than the control group. Effective interventions alleviated disease symptoms, and psychological care helped reduce emotional stress. These findings align with previous reports [10], confirming that continuity of care improves post-discharge life for COPD patients.

COPD patients often experience varying degrees of coughing, breathlessness, and reduced exercise tolerance, severely affecting their lives and imposing heavy burdens on families and society. Given the need for long-term treatment, home-based care and self-care abilities are critical for disease management. Continuity of care enables patients to receive professional guidance and timely correction of unhealthy habits post-discharge, encouraging adherence to prescribed medications and exercises, thereby controlling disease progression and improving quality of life.

However, limitations in this study include inadequate control over factors such as education level, family background, and social support due to time and resource constraints. These factors may have influenced the results. Future research should account for these variables to achieve more accurate findings.

5. Conclusion

In conclusion, consistent with prior studies, this research demonstrates that continuity of care significantly enhances self-care abilities and improves the quality of life for COPD patients. It is a valuable approach worth recommending.

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Disclosure statement

The authors declare no conflict of interest.

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