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Application of Systematic Nursing Intervention in Elderly Hypertension Care and Evaluation of Nursing Satisfaction

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Abstract: *Objective:* To evaluate the nursing effectiveness of systematic nursing for elderly patients with hypertension. *Methods:* Eighty elderly patients with hypertension admitted to the hospital from January 2024 to January 2025 were selected and evenly divided into two groups using a random number table. The experimental group received systematic nursing, while the control group received conventional nursing. Multiple nursing indicators were compared between the two groups. *Results:* The blood pressure levels of the experimental group after nursing were lower than those of the control group, while disease awareness, self-efficacy, and quality of life scores were higher. Nursing satisfaction was also higher in the experimental group ($p < 0.05$). *Conclusion:* Implementing systematic nursing for elderly patients with hypertension can effectively lower blood pressure, enhance patients' awareness of disease knowledge, cultivate their self-efficacy, improve their quality of life, and achieve high nursing satisfaction.

Keywords: Systematic nursing intervention; Elderly hypertension; Blood pressure levels; Disease awareness; Nursing satisfaction

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1. Introduction

Hypertension is a common condition among the elderly, with causes including improper diet, reduced physical activity, and environmental changes, serving as a major risk factor for cardiovascular and cerebrovascular diseases. The primary treatment method for elderly hypertension is oral medication, which can effectively stabilize blood pressure levels and prevent common complications [1]. However, elderly patients often have limited cognitive abilities and may experience discomfort after taking medication, leading to poor treatment compliance. Conventional nursing can guide elderly patients to take medication as prescribed, effectively leveraging the therapeutic effects of drugs, but its nursing measures are relatively rigid and difficult to meet the diverse needs of elderly patients. In contrast, systematic nursing is personalized and comprehensive, providing multidimensional care based on the specific conditions of elderly patients,

improving their compliance while continuously enhancing their quality of life, thereby stabilizing their condition. Based on this, this study selected 80 elderly patients with hypertension to evaluate the implementation effects of systematic nursing.

2. Materials and methods

2.1. General information

Eighty elderly patients with hypertension admitted to the hospital from January 2024 to January 2025 were included and evenly divided into two groups using a random number table. The experimental group included 40 patients, with 23 males and 17 females; aged between 62–88 years, with a mean age of (70.53 ± 4.16) years; with a disease duration ranging from 1–15 years, with a mean duration of (8.16 ± 1.57) years; and with a body mass index ranging from 18.5–28.6 kg/m^2, with a mean of (22.95 ± 3.47) kg/m^2. The control group included 40 patients, with 25 males and 15 females; aged between 61–89 years, with a mean age of (70.72 ± 4.28) years; with a disease duration ranging from 1–16 years, with a mean duration of (8.20 ± 1.61) years; and with a body mass index ranging from 18.3–28.8 kg/m^2, with a mean of (22.91 ± 3.36) kg/m^2. Comparisons of data between the two groups showed $p > 0.05$.

2.1.1. Inclusion criteria

(1) Diagnosed according to the "National Guidelines for the Prevention and Management of Hypertension at the Primary Level (2020)" [2]
(2) Aged ≥ 60 years;
(3) Clear consciousness;
(4) Normal cognitive and communication abilities;
(5) Complete basic information;
(6) Informed consent for the study

2.1.2. Exclusion criteria

(1) Presence of malignant tumors;
(2) Mental illness;
(3) Senile dementia;
(4) Severe complications;
(5) Withdrawal from the study midway

2.2. Methods

The control group received conventional nursing care: Face-to-face communication was conducted with patients to explain the pathological knowledge of hypertension in detail. At the same time, health manuals were distributed to introduce common complications of the disease, dietary taboos, treatment plans, and lifestyle guidance. Emphasis was placed on informing patients of the positive significance of regular medication adherence as prescribed by physicians, so that patients could take their medication on time and in the correct dosage. Meanwhile, close communication was maintained with patients through means such as telephone or WeChat, patiently guiding them to express their inner thoughts. Verbal counseling and the citation of successful cases were used to enhance patients' treatment confidence and maintain a healthy

psychological state.

The experimental group received systematic nursing care:

(1) Cognitive education

Patients' age, educational level, and cognitive status were assessed to scientifically select cognitive education methods, including manual distribution, educational video playback, patient exchange meetings, and knowledge lectures. Specifically, when patients were admitted for follow-up visits, face-to-face oral education was conducted to introduce disease knowledge and self-care methods in detail. Videos of self-care operational procedures were played, and nursing methods were demonstrated on-site to ensure patients clearly mastered the relevant key points. Patient exchange meetings were organized every two weeks, encouraging patients and their family members to participate together, and successful cases were guided to share their treatment experiences and nursing insights, thereby serving as role models. A knowledge lecture was regularly held once a month, delivered by industry experts who meticulously explained disease symptoms, triggers, and daily precautions. At the end of the lecture, a Q&A session was held to encourage patients to raise questions, which were answered by the experts on a one-on-one basis.

(2) Psychological care

Nursing staff conducted face-to-face communication with patients and their family members to assess patients' stressors based on factors such as their verbal expressions, personality traits, and family conditions, providing targeted psychological counseling. For example, patients who were anxious or tense were encouraged to cultivate personal hobbies such as square dancing or playing chess; patients who were depressed or pessimistic were guided to read psychology books or engage in daily meditation training. At the same time, family members were requested to accompany and encourage patients more often, provide attentive care in daily life, and respect and understand patients' inner thoughts, thereby playing a role in family support.

(3 Dietary guidance

Patients' dietary preferences were inquired about, and recipes were reasonably formulated based on their blood pressure levels. Strict limits were placed on salt intake (< 5 g per day), while dietary structure was adjusted to adhere to a low-fat, high-vitamin, and high-protein diet. Patients were advised to consume more high-quality proteins such as meat, eggs, and milk, as well as fresh fruits and vegetables, and to moderately supplement various trace elements. They were instructed to eat small, frequent meals each day and to avoid binge eating or excessive hunger.

(4) Exercise guidance

Patients' exercise tolerance was assessed, and exercise types such as walking, jogging, and Tai Chi were selected based on their individual conditions. A 5–10 minutes warm-up was required before exercise, each exercise session lasted approximately 30 minutes, and exercise intensity was gradually increased. Family members accompanied patients throughout the exercise to prevent accidents.

(5) Medication care

Small pill boxes were distributed to patients, with different colors distinguishing medication types. Patients were instructed to set alarms to prevent missed or incorrect doses. Family members were also encouraged to keep a daily medication diary, meticulously recording medication time, dosage, blood pressure levels, and post-medication reactions each time. The medication diary was submitted during regular follow-up visits to facilitate physicians in assessing patients' blood pressure control outcomes and reasonably

adjusting medication regimens.

The nursing duration for both groups was 3 months.

2.3. Observation indicators

(1) Blood pressure levels

Before nursing and after 3 months, blood pressure monitors were used to assess diastolic and systolic blood pressure.

(2) Disease awareness

A self-made disease awareness evaluation form was used, covering pathological knowledge, common complications, medication knowledge, lifestyle taboos, self-care, and risk factors, with each item scored out of 100 points, and awareness scored positively.

(3) Self-efficacy

During the same period, the General Self-Efficacy Scale (GSES) was distributed, covering control during treatment, self-awareness, confidence, and treatment environment, with each item scored out of 10 points, totaling 40 points, and scored positively.

(4) Quality of life

The Comprehensive Quality of Life Questionnaire (GQOLI) was selected, covering social function, material life, psychological function, and physical function, with each item scored out of 100 points, and scored positively.

(5) Nursing satisfaction

A self-made nursing satisfaction scale was used, covering nursing skills, nursing responsibility, and service attitude, with a total score of 100 points. High satisfaction was defined as > 75 points, basic satisfaction as 40-75 points, and dissatisfaction as < 40 points.

2.4. Statistical analysis

Data were processed using SPSS 28.0 software. Measurement values were compared using *t*-tests, and count values were compared using chi-square tests. Statistical significance was defined as $p < 0.05$.

3. Results

3.1. Comparison of blood pressure levels between the two groups

The blood pressure levels of the experimental group after nursing were lower than those of the control group ($p < 0.05$). See **Table 1**.

Table 1. Comparison of blood pressure levels between the two groups [$\overline{x} \pm s$, mmHg]

Group	No. of cases	Diastolic blood pressure		Systolic blood pressure	
		Before care	After care	Before care	After care
Experimental group	40	108.65 ± 18.53	88.15 ± 9.19	140.51 ± 25.34	119.53 ± 10.84
Control group	40	107.92 ± 17.15	93.86 ± 9.88	141.53 ± 24.91	126.93 ± 11.73
t		0.183	2.676	0.182	2.930
p		0.855	0.009	0.856	0.004

3.2. Comparison of disease awareness between the two groups

The disease awareness scores of the experimental group were higher than those of the control group ($p < 0.05$). See **Table 2**.

Table 2. Comparison of disease awareness between the two groups [$\overline{x} \pm s$, points]

Group	No. of cases	Pathological knowledge	Common complications	Medication knowledge	Life contra indications	Self-care	Risk factors
Experimental group	40	87.63 ± 4.28	85.94 ± 4.07	89.12 ± 3.95	86.47 ± 4.33	88.35 ± 4.19	84.78 ± 4.52
Control group	40	72.58 ± 5.14	71.36 ± 5.02	74.29 ± 4.88	70.95 ± 5.11	73.48 ± 4.96	69.87 ± 5.23
t		14.231	14.269	14.939	14.655	14.484	13.642
p		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

3.3. Comparison of self-efficacy between the two groups

The self-efficacy scores of the experimental group after nursing were higher than those of the control group ($p < 0.05$). See **Table 3**.

Table 3. Comparison of self-efficacy between the two groups [$\overline{x} \pm s$, points]

Group	No. of cases	Sense of control during diagnosis/treatment		Self-awareness		Self-confidence		Diagnosis/treatment environment	
		Before care	After care	Before care	After care	Before care	After care	Before care	After care
Experimental group	40	4.97 ± 1.22	7.13 ± 0.95	5.12 ± 1.18	8.21 ± 0.88	4.89 ± 1.25	7.22 ± 0.91	5.04 ± 1.20	8.09 ± 0.97
Control group	40	4.95 ± 1.24	6.18 ± 1.31	5.15 ± 1.21	6.34 ± 1.28	4.92 ± 1.23	6.03 ± 1.27	5.02 ± 1.22	6.12 ± 1.33
t		0.073	3.713	0.112	7.614	0.108	4.817	0.074	7.569
p		0.942	< 0.001	0.911	< 0.001	0.914	< 0.001	0.941	< 0.001

3.4. Comparison of quality of life between the two groups

The quality-of-life scores of the experimental group after nursing were higher than those of the control group ($p < 0.05$). See **Table 4**.

Table 4. Comparison of quality of life between the two groups [$\overline{x} \pm s$, points]

Group	No. of cases	Social function		Material life		Psychological function		Physical function	
		Before care	After care	Before care	After care	Before care	After care	Before care	After care
Experimental group	40	62.37 ± 5.84	85.92 ± 4.17	64.15 ± 5.69	86.48 ± 4.03	61.83 ± 5.91	84.76 ± 4.35	63.02 ± 5.77	85.19 ± 4.28
Control group	40	62.51 ± 5.76	73.64 ± 5.82	64.03 ± 5.73	74.85 ± 5.64	61.94 ± 5.86	72.91 ± 5.93	62.94 ± 5.81	73.52 ± 5.78
t		0.108	10.848	0.094	10.611	0.084	10.191	0.062	10.262
p		0.914	< 0.001	0.925	< 0.001	0.934	< 0.001	0.951	< 0.001

3.5. Comparison of nursing satisfaction between the two groups

The nursing satisfaction in the experimental group was higher than that in the control group ($p < 0.05$). See **Table 5**.

Table 5. Comparison of nursing satisfaction between the two groups [n/%]

Group	Number of cases	Highly satisfied	Basically satisfied	Dissatisfied	Satisfaction rate
Experimental group	40	23	16	1	97.50 (39/40)
Control group	40	19	14	7	82.50 (33/40)
χ^2					5.000
p					0.025

4. Discussion

The primary risk factors for hypertension include poor lifestyle habits, a family history of genetic disorders, and dietary factors, among others. The elderly are particularly susceptible to hypertension, which serves as a major cause of cardiovascular and cerebrovascular diseases in this demographic [3]. In addition to standardized pharmacological treatment, elderly patients with hypertension require targeted and comprehensive nursing to enhance their medication adherence, correct their unhealthy lifestyle habits, effectively control their blood pressure levels, and reduce disease complications. Conventional nursing focuses on knowledge, education, and medication usage in elderly patients. Although it can provide individualized guidance for nursing behaviors, its content is relatively singular, and its nursing forms are limited, resulting in generally average nursing quality [4]. In contrast, systematic nursing involves a holistic assessment of elderly patients, fully understanding their disease conditions and individual characteristics, thereby formulating effective nursing plans and providing nursing interventions at multiple levels, including physiological, social, and psychological aspects, demonstrating high scientific rigor in nursing.

The results showed that the blood pressure levels in the experimental group were lower than those in the control group ($p < 0.05$). The reason for this is that systematic nursing can comprehensively assess changes in patients' blood pressure and scientifically adjust nursing measures based on individual factors, strengthening medication nursing for patients [5]. Additionally, by utilizing various means such as small pillboxes and medication diaries, it improves patients' medication adherence, strictly monitors changes in blood pressure, and promptly adjusts medication plans, thereby effectively improving patients' hypertension conditions. Furthermore, systematic nursing emphasizes dietary and exercise guidance, enabling patients to understand the negative impact of unhealthy habits on their own conditions and thus actively adhere to healthy lifestyle habits, which is conducive to long-term blood pressure stability [6].

The disease awareness scores in the experimental group were higher than those in the control group ($p < 0.05$). The reason for this is that systematic nursing emphasizes cognitive education and can correct patients' misconceptions through various channels, such as knowledge manuals, educational videos, and patient exchange meetings, enabling them to fully understand disease causes and self-care methods, thereby correctly facing hypertension and efficiently cooperating with subsequent nursing plans [7].

The self-efficacy scores in the experimental group were higher than those in the control group ($p < 0.05$). The reason for this is that systematic nursing has strong individualized characteristics, highly respecting patients' personality traits and nursing needs, and fully leveraging the supervisory and supportive roles of

family members, thereby effectively enhancing patients' treatment confidence [8]. Additionally, systematic nursing continuously cultivates patients' self-care skills, enabling them to possess basic nursing abilities and thereby enhancing their self-efficacy [9].

The quality-of-life scores and nursing satisfaction in the experimental group after nursing were higher than those in the control group ($p < 0.05$). The reason for this is that systematic nursing is comprehensive and can adjust patients' dietary structures and exercise plans while providing cognitive education, guiding patients to develop healthy thought patterns and correct lifestyles, thereby improving their quality of life [10,11]. Moreover, systematic nursing has strong interactivity, increasing the frequency of communication between nurses and patients, establishing a mutually trusting nurse-patient relationship, and actively soliciting patients' nursing opinions, making them the leaders of nursing services, which is conducive to enhancing their nursing satisfaction.

5. Conclusion

In conclusion, implementing systematic nursing for elderly patients with hypertension can stably and continuously lower blood pressure, improve patients' disease awareness and self-efficacy, optimize their quality of life, and achieve high levels of satisfaction.

Disclosure statement

The author declares no conflict of interest.

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