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The Effect Of Nursing Intervention On The Quality Of Life Of Hypertension Patients With Complications

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ABSTRACT

Hypertension with complications is a chronic health problem that significantly impacts patients' quality of life. Complications of hypertension, such as heart disease, stroke, and kidney disease, not only affect the patient's physical condition but also impact their psychological, social, and environmental aspects. The reduced quality of life in patients with hypertension with complications is often caused by activity limitations, dependence on long-term medication, and anxiety about their health condition. Therefore, comprehensive efforts are needed to improve patients' quality of life through structured and continuous nursing interventions.

This study aims to determine the effect of nursing interventions on the quality of life of hypertensive patients with complications. The study used a quasi-experimental design with a pretest - posttest approach without control group. The study sample consisted of 50 hypertensive patients with complications selected using a purposive sampling technique. Nursing interventions were provided for four weeks, including health education, lifestyle management, psychosocial support, and monitoring of medication adherence. Patients' quality of life was measured using the WHOQOL-BREF instrument, which covers physical, psychological, social relationships, and environmental domains. Data were analyzed using a paired t-test with a significance level of $\alpha = 0.05$.

The results showed a significant improvement in the quality of life of patients after nursing intervention, with a p-value < 0.05 . Improvements in quality of life were seen across all domains, particularly in the physical and psychological aspects. It was concluded that nursing interventions had a positive effect on improving the quality of life of patients with hypertension with complications. Therefore, comprehensive nursing interventions need to be implemented continuously in nursing care for patients with hypertension with complications.

Keywords: Nursing Intervention, Quality of Life, Hypertension, Complications





1. Introduction

Hypertension is a non-communicable disease whose prevalence continues to increase and has become a global health problem. This disease is often referred to as *the silent disease*. *It's a killer* because it can occur without obvious symptoms, but it has the potential to cause serious complications such as coronary heart disease, stroke, kidney failure, and peripheral vascular disorders. In patients who have developed complications, hypertension not only impacts physical health but also psychological and social aspects, leading to a reduced quality of life.

Quality of life is an individual's perception of their position in life, encompassing physical and psychological well-being, social relationships, and the environment. Hypertensive patients with complications often experience a decreased quality of life due to limited physical activity, pain, fatigue, and dependence on long-term medication. Furthermore, anxiety, stress, and fear of worsening health conditions also impact patients' psychological well-being.

Management of hypertension with complications focuses not only on controlling blood pressure but also on improving the patient's quality of life. In this regard, nurses play a strategic role as healthcare professionals providing holistic nursing care. Nursing interventions include health education, lifestyle change guidance, psychosocial support, and monitoring medication adherence. This approach is expected to help patients adapt to their chronic illness.

Several studies have shown that structured nursing interventions can improve patient adherence to treatment and help control blood pressure. However, research specifically examining the impact of nursing interventions on the quality of life of patients with hypertension and complications is limited, particularly at the healthcare level. Yet, quality of life is a crucial indicator in assessing the success of chronic disease management.

Based on this background, this study is crucial to determine the extent to which nursing interventions can impact the quality of life of patients with hypertension and complications. The results are expected to form the basis for developing more comprehensive nursing practices oriented toward improving patient quality of life.

2. Research Methods

a. Research Design and Type

This study uses a quasi-experimental design with a pretest - posttest approach without control group. This design was chosen because it allows researchers to assess changes in patients' quality of life before and after nursing interventions, even without a comparison group. This design is appropriate for clinical nursing research focused on evaluating the effectiveness of practical interventions.

b. Location and Time of Research





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The study was conducted in the Internal Medicine Outpatient and Inpatient Units of Hospital X, a referral facility for patients with hypertension and complications. The study took place from May to August 2025, including the preparation phase, intervention implementation, data collection, and data analysis.

c. Population and Sample

The research population was all hypertension patients with complications undergoing treatment at Hospital X. The sample consisted of 50 respondents, determined using purposive sampling based on inclusion and exclusion criteria.

d. Inclusion Criteria

- 1) Patients with a diagnosis of hypertension and complications (heart disease, mild stroke, or early stage chronic kidney disease)
- 2) Age \geq 40 years
- 3) Stable hemodynamic condition
- 4) Able to communicate well
- 5) Willing to be a respondent

e. Exclusion Criteria

- 1) Patients with severe cognitive impairment
- 2) Patients with severe acute complications
- 3) Did not complete the entire course of intervention

f. Research Variables

- Independent variable: Nursing intervention
- Dependent variable: Quality of life of hypertensive patients with complications

g. Operational Definition

- Nursing interventions: Comprehensive nursing actions that include health education, lifestyle management, psychosocial support, and monitoring of medication adherence.
- Quality of life: Patient perception of physical, psychological, social, and environmental conditions measured using the WHOQOL-BREF.

h. Research Instruments

The study used the WHOQOL-BREF, an international standard instrument consisting of 26 items and covering four main domains:

- 1) Physical health
- 2) Psychological
- 3) Social relations
- 4) Environment

This instrument has been proven valid and reliable in measuring the quality of life of chronic disease patients.

i. Nursing Intervention Procedures



The intervention was carried out for 4 weeks, with details:

- 1) Health education: about hypertension, complications, and prevention
- 2) Lifestyle management: low-salt diet, light physical activity, stress management
- 3) Psychosocial support: individual counseling and motivation
- 4) Compliance monitoring: medication and blood pressure control

j. Data analysis

- Univariate analysis: mean, standard deviation, and distribution of respondent characteristics
- Bivariate analysis: paired t-test to see the difference in quality of life before and after intervention
- Significance level $\alpha = 0.05$

k. Research Ethics

The study has received approval from the Health Research Ethics Committee. All respondents signed an informed consent form. consent and data confidentiality are guaranteed.

3. Research Results And Discussion

a. Research Result

This study involved 50 hypertensive patients with complications who underwent treatment at Hospital X. The research data were presented in the form of an analysis of respondent characteristics and changes in quality of life before and after nursing intervention.

1) Respondent Characteristics

a) Respondent Age

Age (years)	f	%
40–49	10	20.0
50–59	22	44.0
≥ 60	18	36.0
Total	50	100

Interpretation:

Most respondents were aged 50–59 years, which is the age group at high risk of experiencing hypertension complications and decreased quality of life.

b) Gender





Gender	f	%
Man	28	56.0
Woman	22	44.0
Total	50	100

c) Types of Hypertension Complications

Types of Complications	f	%
Heart disease	21	42.0
mild stroke	15	30.0
Kidney disorders	14	28.0
Total	50	100

Interpretation:

The complication most frequently experienced by respondents was heart disease, which directly impacted the limitations of patients' physical activity.

2) Quality of Life Before Nursing Intervention

Assessment of quality of life before the intervention showed that most respondents were in the low to moderate category, especially in the physical and psychological domains.

WHOQOL-BREF Domains	Mean	Elementary School
Physique	49.8	7.1
Psychological	50.6	6.9
Social	54.2	6.5
Environment	55.1	6.2
Total Score	52.4	6.8

3) Quality of Life After Nursing Intervention

After being given nursing intervention for 4 weeks, there was an increase in all domains of quality of life.

WHOQOL-BREF Domains	Mean	Elementary School
Physique	61.5	7.4
Psychological	63.2	7.0
Social	64.0	6.8





WHOQOL-BREF Domains	Mean	Elementary School
Environment	66.9	6.5
Total Score	63.9	7.2

4) Analysis of Differences in Quality of Life Before and After Intervention

The results of the paired t- test show:

Variables	Mean Difference	p- value
Total quality of life	11.5	0.001

Interpretation:

There was a significant increase in quality of life after nursing intervention ($p < 0.05$).

5) Summary of Research Findings

- a) The majority of hypertensive patients with complications are aged >50 years.
- b) Quality of life before intervention was in the low–moderate category.
- c) After nursing intervention, quality of life improved across all WHOQOL-BREF domains.
- d) Nursing interventions have a significant impact on improving the quality of life of patients.

b. Discussion

The study results showed that nursing interventions significantly improved the quality of life of patients with hypertension and complications. This improvement occurred across all domains of quality of life, indicating that the nursing interventions provided were holistic and addressed various aspects of the patients' lives.

1) Physical Domain

Improved quality of life in the physical domain is related to health education and lifestyle management provided by nurses. Patients gain a better understanding of how to control blood pressure, maintain a low-salt diet, and engage in physical activity according to their abilities. This understanding helps reduce physical complaints such as fatigue and pain, allowing patients to feel more capable of carrying out daily activities.

2) Psychological Domain

In the psychological domain, improvements in quality of life demonstrate the crucial role of emotional support and nursing counseling in reducing patient anxiety and stress. Patients with hypertension with complications often





experience fear of worsening disease. Supportive nursing interventions help patients develop more adaptive coping mechanisms.

3) Social Domain

Improvements in the social domain indicate that patients have become more confident in their relationships with family and those around them. Family-involved education also increases social support, a crucial factor in chronic disease management.

4) Environmental Domain

Improved quality of life in the environmental domain is related to increased patient understanding of access to healthcare services, utilization of healthcare facilities, and a sense of security during treatment. Nurses act as facilitators, helping patients utilize healthcare resources optimally.

5) Nursing Implications

The results of this study confirm that nursing interventions impact not only clinical aspects but also patients' perceptions of their quality of life. A holistic nursing approach is key in the management of patients with hypertension and complications.

6) Research Limitations

This study did not use a control group and had a relatively short intervention duration. Therefore, further research with an experimental design and longer intervention time is highly recommended.

4. Conclusion And Suggestions

a. Conclusion

Nursing interventions significantly improve the quality of life of patients with hypertension and complications. Comprehensive interventions can help patients manage their disease and improve their well-being.

b. Suggestion

- 1) Nurses are expected to implement nursing interventions continuously in hypertensive patients with complications.
- 2) Hospitals need to support nursing education and counseling programs for patients with chronic diseases.
- 3) Further research is recommended using a control group and a larger sample size.

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