

Original Research**Telenursing-Based Self-Care Management Education Improves The Quality Of Life Of Hypertension Sufferers In The Rural Area Pragaan Health Center****Emdat Suprayitno^{1*}, Dian Permatasari², Nailiy Huzaimah³**^{1,2,3} Faculty of Health Sciences, Wiraraja University, Indonesia**ABSTRACT**

Background: A person's view of their life within the framework of their culture and values, which encompass the areas of physical, psychological, social, and environmental activities, is referred to as their quality of life. In order to raise awareness and promote self-care, intervention measures are desperately needed. The purpose of this research is to evaluate how telenursing education affects hypertension patients' quality of life.

Methods: This study used a quasi-experimental methodology. With a simple random sample, the population consisted of sixty hypertensive people. The sixty-person sample was split into two groups: thirty individuals in the treatment group got an educational intervention centered around supportive care, while thirty individuals in the control group were given hypertension pamphlets.

Results: The quality of life score in the treatment group following the intervention was $p = 0.000$, according to research based on the independent *t*-test. The study's findings demonstrated the effectiveness of telenursing instruction in raising hypertension patients' quality of life; as such, this intervention may catalyze raising hypertensive patients' levels of self-care.

Conclusion: In conclusion, telenursing education support has an impact on hypertension patients' quality of life.

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hypertension, quality of life, selfcare, telenursing;

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INTRODUCTION

Worldwide, hypertension, which is the most common risk factor for cardiovascular disease and a major public health problem, has not been effectively controlled (Suprayitno & Damayanti, 2020). The emergence of health problems in this area can be caused by individual negligence, such as unhealthy eating habits, as well as ignorance about how to maintain life, health, development, and the lives of those around them, as well as a lack of thoroughness. information about hypertension (Gupta & Xavier, 2018). An individual's social life and quality of life may be impacted by

hypertension. A person's physical, social, environmental, and psychological activities will all improve with improved quality of life, which will reduce risk factors for hypertension (Sarzynska et al., 2021).

Based on the Sumenep District Health Office, in 2020, there were 253,426 people with hypertension, and 2004,783 people with hypertension in 2021. Based on data from the Pragaan Community Health Center, from January to April 2021, there were 840 sufferers. Data on the number of patient visits increases every year from 2020 to 2022, with an average complaint of decreased quality of life such as decreased physical function and symptoms of dizziness.

The findings of a preliminary survey conducted on December 20, 2022, found that eight hypertensive individuals in the Pragaan region who reported feeling uneasy about their ability to take care of their health at home had their status evaluated at Puskesmas if they had no symptoms, such as lightheadedness. If high blood pressure sufferers with ignorance don't get treatment, it can worsen their condition by increasing their risk of heart disease, stroke, and renal damage. In the event that it is paired with unhealthy lifestyle choices, the patient will develop chronically high blood pressure (H. Zhang et al., 2019).

A person's quality of life and social life may be affected by hypertension. If an individual enhances their quality of life, encompassing physical, social, environmental, and psychological activities, their risk of hypertension will decline (Snarska et al., 2020). The development of science, technology, and information has significantly influenced lifestyle changes. Unfavorable lifestyle, which includes frequent consumption of salty foods, lack of fruit and vegetables, lack of activity, smoking, excessive consumption of alcohol and caffeine, and increased stress levels (M. Zhang et al., 2021). Because an unhealthy lifestyle has the potential to exacerbate hypertension, it is hypothesized that this unhealthy lifestyle is associated with a lower quality of life for people with hypertension (A. Sari et al., 2017).

Hypertension cannot be cured quickly. Uncontrolled hypertension will lead to numerous complications. Lowering blood pressure improves physical, psychological, social, and environmental functioning as well as quality of life in hypertensive individuals. Following medical staff recommendations and engaging in other therapeutic activities should be done systematically, especially if the patient is already aware of hypertension. A person will behave in more ways the more knowledge they have about a subject.

In the context of the rising number of people with hypertension, rising blood pressure, and other quality-of-life issues they face, nurses' challenge is to improve patients' quality of life by providing high-quality, comprehensive, and patient-centered nursing care (Suprayitno & Huzaimah, 2020). As a result, patients with high blood pressure must actively manage their condition throughout their lives. Therefore, self-care management education based on telenursing is needed (N. P. W. P. Sari, 2017).

The novelty of this research is that it uses a telenursing-based self-care management education method, whereas previous research has never been carried out using a telenursing method with self-care management material to improve the quality of life for hypertension. This is proven by several recent studies that have been carried out, namely Sri Astutik Andayani Research in 2023 Self-Care Management Education, only to influence blood pressure. Firmansyah's 2023 research is on education in improving the quality of life and compliance in hypertension sufferers.

In this research, the media used was a flipchart. From several recent research results, it can be concluded that the research I will conduct is novel in the variables studied and the educational methods used, where telenursing is still very rarely done as an effort to improve the quality of life of hypertension sufferers (Andayani, 2023; Firmansyah et al., 2023).

MATERIALS AND METHOD

Research Methods or Materials and Methods, and not "Methodology"; all This research is a quantitative study with a quasi-experimental design that aims to analyze the effect of telenursing-based self-care management educational interventions on the quality of life of hypertension sufferers. The quasi-experimental research design attempts to reveal cause-and-effect relationships by involving a control group and an experimental group. The population in this study were all hypertensive patients in the working area of the Pragaan Public Health Center.

The sample in this study were hypertension sufferers who met the inclusion criteria, namely sufferers who were willing to be research objects, did not suffer from complications such as heart failure or shortness of breath, and did not experience difficulties in carrying out activities, namely 60 people. Two groups were used in the simple random sampling technique. The control group received only a leaflet about the impact of telenursing-based self-care management education on the quality of life of hypertension patients, while the first group received an educational intervention based on telenursing via WhatsApp media.

The education was carried out for approximately 2 months based on telenursing using the WhatsApp application. Education was carried out in stages, namely in the first month: In the first week, education was carried out with material on the introduction of hypertension. In the second week, education was carried out with material on the importance of regular blood pressure checks and the importance of medication. In the third week, education is carried out by continuing to consume medication consistently and obediently throughout the program. Suggesting several herbal remedies, such as consuming cucumbers, tomatoes, and noni, as a distraction during the activity program.

In the fourth week, explain hypertension exercises (benefits and movements), demonstrate hypertension exercises, and encourage hypertension sufferers to follow hypertension exercise movements. In education in the second month, the material presented is the same as the material in the first month, but at the end of the second month, another examination is carried out on the quality of life of hypertension sufferers. This research has passed the ethical test by the Wiraraja University Health Research Ethics Committee with number 002/KEPK-FIK/UNIJA/VI/2023.

RESULTS

To describe the research general data

Table 1. Characteristics Respondent

Criteria	Treatment group		Control group	
	Frequency	Percentage	Frequency	Percentage
Age				
< 45 years	8	26 , 7	5	16 , 7
45-60 years	12	40 , 0	22	73 , 3

Criteria	Treatment group		Control group	
	Frequency	Percentage	Frequency	Percentage
>60 years	10	33,3	3	10,0
Gender				
Woman	24	80,7	22	73,3
Man	6	20,3	8	26,7
Education				
No School	0	0,0	0	0,0
Elementary School	25	83,0	16	53,3
Junior High School	3	10,0	12	40,0
Senior High School	2	6,7	2	6,7
Occupation				
No Work	6	20,0	4	13,3
Farmer	23	76,7	24	80,0
Private	0	0,0	0	0,0
Self-employed	1	3,3	0	0,0
Civil servants	0	0,0	2	6,7
Marital Status				
No Marry	0	0,0	0	0,0
Marry	30	100,0	30	100,0
Hypertension I	12	40,0	14	46,7
Hypertension II	13	43,0	7	23,3
Hypertension II	5	16,7	9	30,0
Total	30	100%	30	100%

Based on Table 1 distribution frequency of respondents according to age, it was obtained that respondents suffered from hypertension in the group treatment almost half were aged 45–60 years, as many as 12 respondents (40%), and groups with a large age range of 45–60 years, that is, as many as 22 respondents (73.3%). The distribution frequency of respondents according to type of gender is unknown; almost all of the respondents in the group treatment are women (80.7%), and some of the big group control are women (73.3%). Distribution frequency respondents according to education: it is known that almost all of the respondents' group treatment is women (80.7%) and some big group control are women (73.3%).

Distribution frequency of respondents according to education: it is known that almost all respondents who suffer from hypertension group treatment in elementary school are educated, that is, 25 respondents (83.0%). Meanwhile, in the group control, as many as 16 respondents (53.3%), distribution frequency respondents according to work, knowing that almost half of the respondents suffered from hypertension group treatment (76.7%) and control (80.0%) worked as farmers. Distribution frequency of respondents according to marital status: it is known that all respondents suffer from hypertension group treatment, and the control is Marry (100%). Distribution frequency

of respondents according to the degree of hypertension: it is known that almost half of the respondents suffer from hypertension; group treatment is Hypertension II (43.0 %), whereas in group control almost half is Hypertension I (46.7%).

To describe the research special data

Table 2. Difference in average quality of life score after telenursing educational intervention in the intervention group and control group

Variable	Group	Mean	SD	Pvalue
Quality of life	Intervension	55,23	2,38	0,001
	Control	81,20	2,51	

The average quality of life score for the control group following the telenursing education intervention was 54.81 (9.92), according to Table 7, while the average quality of life score for the intervention group following the telenursing education intervention was 55.23 (10.97). Following the telenursing education intervention, there was a significant difference in the quality of life scores between the control group and the intervention group, as indicated by the Mann-Whitney test results for the quality of life score ($p = 0.001$).

DISCUSSION

Following the telenursing education intervention, there was a significant difference in the quality of life score between the control group and the intervention group, according to the results of the independent t-test for the quality of life score, which was $p = 0.001$. In the treatment group, there were differences in quality of life. After being given telenursing intervention, quality of life due to pathological processes would result in a decrease in physical abilities in hypertensive patients, which was manifested by weakness, a feeling of lack of energy, and dizziness, which had an impact on the patient's psychology where the patient felt that his life was meaningless due to weakness (Sakinah & Nurdin, 2020). The disease process, which is a terminal illness. So interventions are needed to help people improve their quality of life, namely by providing caring-based supportive educational interventions, and the results of providing interventions in the treatment group are improvements in quality of life consisting of physical, psychological, social, and environmental activity domains (Mohsen et al., 2020).

The results of this research are in line (Lathifa and Mahmudiono, 2020). Research conducted on the role of web-based educational media can influence knowledge and attitudes, which are carried out gradually and continuously in achieving health to support the quality of life (Ernawati et al., 2022). Telenursing is also a way of providing educational support that is provided in groups so that it is hoped that it can improve self-care through the use of various methods, including teaching (learning techniques that can improve understanding of disease and quality of life), guiding (guidance), providing an environment (an environment that can support), and providing patient skills in an effort to improve abilities in improving the quality of life (Rad et al., 2023).

Telenursing is a system that provides benefits to improve health services, especially in nursing. The existence of the telenursing system is not an alternative for nurses to communicate, but this technology is only a means. Nurses can immediately

carry out follow-ups to find out the client's condition, take action, and interact directly to fulfill nursing care (Tarigan, 2022).

Good communication is a positive result of telenursing. Good communication has an impact on feelings in every word that is easy to understand. The nurse's advice to clients and families, if followed, has an impact on the client's recovery motivation. Health education facilities and easy access make it easy for respondents to control their illness, thereby indirectly affecting their physical and psychological quality (Merritt, 2020).

Providing telenursing intervention methods can increase patient motivation in the healing process so that patients are more motivated to be able to return to normal activities immediately. The attention and follow-up from nurses while undergoing therapy at each patient's home do not limit communication between nurses and patients, where patients can at any time more freely convey their health situation or condition regarding the therapy and treatment being carried out. The impact of the use of telenursing was felt by patients.

According to the results of interviews, patients felt continuous attention and monitoring from nurses through uploading videos, photos, and comments entered via cellphone messages. Telenursing monitoring can increase patient motivation towards awareness to always carry out treatment procedures appropriately, maintain better health conditions related to preventing complications, and manage nutrition and daily activity patterns so that a better quality of life can be maintained.

CONCLUSION

There was a significant difference in quality of life scores between the control group and the intervention group after the distance nursing education intervention. The nurse's advice to the client and family, if followed, will impact the client's motivation to recover. Health education facilities and easy accessibility help respondents easily control their diseases, thereby indirectly affecting their physical and psychological quality.

Consider the use of telenursing as a model of nursing care in line with technological developments that influence the practice of caring professions for hypertensive patients. Making telenursing integrated care between patients and service providers, where nurses can take part in continuous patient health assessments, is a concept and consequence of technological demands in the world of care to improve the quality of life of patients. Future researchers can develop more informative applications.

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