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Giving Foot Soak Therapy Using Warm Water to Reduce Blood Pressure in Elderly Hypertension in Inpatient Room of Hospital X

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ABSTRACT

Background: Hypertension is often referred to as the Silent Killer and most people with hypertension are never aware of the signs and symptoms. And for this reason it is very important that blood pressure must be measured regularly. Objective: To be able to understand, explain and apply evidence-based practices in professional nursing, after carrying out Foot Soak Therapy Using Warm Water to Reduce Blood Pressure in Hypertensive Elderly in the Inpatient Room of X Hospital Research Method: Evidence base nurse (EBN) design used is the Quasy Experiment, especially the pretest-posttest design. Namely by conducting observations before and after the intervention without a control group. There were two intervention groups, namely the group that was given foot soak therapy using warm water for 4 consecutive days and carried out2 times a day. Results: The results show that after the intervention the blood pressure in elderly patients had a mean value of 1.75 (SD=0.500) while in the control group the mean blood pressure had a mean value of 1.50 (SD=0.577) with a p-value of 0.083 or greater than the significance value of p -value >0.05 Conclusion: which means there is no significant difference in mean blood pressure between the foot soaking intervention group using warm water and the control group in reducing blood pressure in the elderly in this study

Keywords: Warm water foot soak therapy; blood pressure; hypertension

INTRODUCTION

Hypertension is often referred to as the Silent Killer and most people with hypertension never realize the signs and symptoms. And for this reason it is very important that blood pressure should be measured regularly. When someone experiences symptoms that actually occur, the symptoms can be nosebleeds, morning headaches, irregular heart rhythms, changes in /vision, and ears tend to ring often (Mutmainnah et al., 2021). High blood pressure is called the silent killer because it is a deadly disease, high blood pressure can affect anyone, both young and old (Wulandari et al., 2016). Common causes of hypertension include unhealthy lifestyle habits and high salt consumption

habits, obesity, stress, smoking and frequent alcohol consumption, and habits of consuming foods high in fat (Machus et al., 2020). Based on records from the World Health Organization (WHO), hypertension is one of the most important for heart disease and stroke which is the number one cause of premature death and disability in the world (Susanto et al., 2019).

The prevalence of hypertension based on measurement results in the population aged > 18 years was 34.1%, high in South Kalimantan (44.1%), while the lowest was in Papua at (22.2%) (Riskesdas 2018, 2018). Hypertension occurs in the age group 31-44 years (31.6%), 45-54 years (45.3%), 55-64 years (55.2%). DKI Jakarta itself is the area with the most people suffering from hypertension in (2018) is Central Jakarta with a presentation of 39.05% and the next is East Jakarta with a percentage of Soaking feet using warm water is a therapy that uses warm water which has an effect on muscle circulation so that soaking feet using warm water will make blood circulation smooth. Soaking feet using warm water will cause a system response that occurs in vasodilation (widening of blood vessels) (Milindasari et al., 2022).

Elderly is someone who has reached the age of 60 years and over where there is an aging process that results in a decrease in the body's resistance in dealing with various stimuli from within and outside (Astutik, M. F., & Mariyam, M. (2021). Elderly is someone who has reached the age of 60 years and over where. improving the quality of life of the elderly, one of which is health, one of the health problems that often appears in the elderly is hypertension which is caused by poor diet, often consuming foods high in fat and drinking alcoholic beverages and smoking and a poor lifestyle, rarely exercising. (Mampa et al., 2022). Elderly is someone who has reached the age of 60 years and over where there is an aging process that results in a decrease in the body's resistance in dealing with various stimuli from within and outside (viana & Sari 2022). According to research by Masi & Rottie, (2017). The results of Reny Chaidir's research (2022) the results obtained were the average decrease in systolic blood pressure before and after the warm water foot soak therapy intervention was 10 mmHg and the decrease in diastolic blood pressure before and after the warm water foot soak therapy intervention was 9 mmHg. The conclusion of this study is to suggest that people with hypertension undergo warm water foot soak therapy to overcome their hypertension, as a form of complementary therapy that is cheap and easy to do independently (Chaidir et al., 2022).

The results of a preliminary study that researchers have conducted on January 21,

2024 at Hospital X in obtained results from 201 elderly people. Researchers conducted interviews with 5 elderly people and obtained blood pressure measurement data showing that they had mild hypertension. When interviewed about the history of taking hypertension medication, 3 elderly people said they always took antihypertensive medication regularly, and 2 said they were irregular. Furthermore, from the history of using non-pharmacological therapy to overcome hypertension, the four elderly people said they had never done it. Based on the background above, the researcher is interested in conducting a study on the Provision of Foot Soak Therapy Using Warm Water to Reduce Blood Pressure in Hypertensive Elderly in the Inpatient Room of Hospital X. The formulation of the problem in this study is how the Provision of Foot Soak Therapy Using Warm Water to Reduce Blood Pressure in Hypertensive Elderly in Hospital X. The purpose of this nursing care is expected to be able to understand, explain and apply evidence-based practices in professional nursing, after the Provision of Foot Soak Therapy Using Warm Water to Reduce Blood Pressure in Hypertensive Elderly in the Inpatient Room of Hospital X.

MATERIALS AND METHODS

The evidence based nurse (EBN) design used is a Quasy Experiment, especially the pretest-posttest design. Namely by conducting observations before and after the intervention without a control group. There are two intervention groups, namely the group given Foot Soak Therapy Using Warm Water for 4 consecutive days and carried out 2 times a day

RESULTS

Based on Table 1 shows the distribution of respondents in this study, the majority were male at 75% with the same age and education level at 50%. The majority of patients' blood pressure before the intervention (pretest) was in the high BP category at 75% and the blood pressure category after the intervention (posttest) was in the normal category at 75%.

Table 1. Frequency Distribution of Respondents Based on Age, Gender, Education, and Job (n=4)

Respondent Characteristics	*Frekuensi (n)*	*Persentase (%)*
Age		
55-60 years	2	50
>61 years	2	50
Education Level		
Low Education (Elementary School/Junior High School/Senior High School)	2	50
High Education (Diploma Sarjana)	2	50
Gender		
Male	3	75
Female	1	25
Blood Pressure Before Interventio		
Normal TD	1	25
High TD	3	75
Blood Pressure After Intervention		
Normal TD	3	75
High TD	1	25

Based on table 2 shows the distribution of warm water foot soaks on decreasing blood pressure in elderly patients before and after the intervention, the results show that before the intervention, the blood pressure of elderly patients with a mean value of 1.75 (SD = 0.500) while the average decrease in blood pressure after the foot soak intervention with a mean value of 1.25 (SD = 0.577) with a p-value of 0.157 or greater than the significance value of p-value> 0.05 which means that there is no effect of soaking feet using warm water on decreasing blood pressure in the elderly in this study.

Table 2: Distribution of mean results before and after giving foot soaks to the elderly (n=4)

Variabel	Pre test		Post test		P-Value
	Mean	SD	Mean	SD	
Elderly BP Decrease	1.75	0.500	1.25	0.577	0.157

Based on table 3 shows the distribution of warm water foot soaks on decreasing blood pressure in elderly patients after intervention, the results show that after intervention, the blood pressure of elderly patients with a mean value of 1.75 (SD = 0.500) while in the control group the mean blood pressure with a mean value of 1.50 (SD = 0.577) with a p-value of 0.083 or greater than the significance value of p-value> 0.05 which means there is no significant difference in the mean blood pressure between the warm water foot soak intervention group and the control group on decreasing blood pressure in the elderly in this study.

Table 3. Frequency distribution between intervention group and control group on the mean reduction in joint pain (n=4)

Variabel	Kelompok Intervensi		Kelompok Kontrol		P-Value
	Mean	SD	Mean	SD	
Lowering Blood Pressure in the Elderly	1.75	0.500	1.50	0.577	0.083

DISCUSSION

The results show that the distribution of respondents in this study was predominantly male at 75% with the same age and education level at 50%. The majority of patients' blood pressure before the intervention (pretest) was in the high BP category at 75% and the blood pressure category after the intervention (posttest) was in the normal category at 75%. During menopause, the estrogen hormone which plays a role in increasing High Density Lipoprotein (HDL) levels is tasked with protecting against thickening of the blood vessel walls or atherosclerosis begins to decrease, resulting in arterial stiffness and reduced elasticity in the blood vessels (Nazaruddin et al., 2021). The respondents in this study were elderly people aged over 65 years and over, increasing age in women related to this estrogen hormone will decrease so that women are susceptible to hypertension after menopause. (Fitrina et al., 2021).

This study is in line with the study conducted by Sumyati et al., (2022) that hypertension sufferers are more experienced by women more than half (67.5%) compared to men less than half (32.5%). The researcher's assumption is that the respondents in this study are elderly women over the age of 60 years, at this age the elderly have experienced menopause which causes thickening of the blood vessel walls or atherosclerosis to decrease, resulting in arterial stiffness and reduced elasticity in blood vessels resulting in increased blood pressure compared to men. The study is in line with the study of Anrieany & Burhanto (2022) which states that out of 17 respondents with elementary-junior high school education, there were 7 respondents with a percentage of 41.18%. This is in line with the study conducted by Yuninda Tomayahu (2023) which stated that out of 34 respondents, 17 with a presentation of 50.0% had elementary school education. The results of this study are in line with research conducted by Nazaruddin et al (2021) which states that women are more susceptible to hypertension with a percentage of 17 respondents more than half (54.8%). This is in line with research conducted by Yuninda Tomayahu (2023) which stated that out of 34 respondents, 17 with a presentation of 50.0% had elementary school education. This is the same as research by Wijaya et al., (2019) which states that the most triggering factors for hypertension are lack of sports activity and consuming sodium salt.

Showing the distribution of warm water foot soaks on decreasing blood pressure in elderly patients before and after the intervention, the results showed that before the intervention, the blood pressure of elderly patients had a mean value of 1.75 (SD = 0.500)

while the average decrease in blood pressure after the foot soak intervention was carried out with a mean value of 1.25 (SD = 0.577) with a p-value of 0.157 or greater than the significance value of p-value> 0.05, which means that there is no effect of soaking feet using warm water on decreasing blood pressure in the elderly in this study. The results of previous research conducted by Viana & Sari (2022) were in line with research where there was a significant decrease in blood pressure showing that there was a difference in blood pressure before and after warm water foot soaks, showing a p-value of 0.00 <0.05, meaning that there is an effect of warm water foot soaks on blood pressure in the elderly. In line with previous research by Rayuningtyas (2019) stated that as many as 15 respondents who were given foot soaks using warm water, the average effect of foot soaks with warm water on systolic blood pressure was 22,000 and on diastolic blood pressure was 3,571.

The results of the Paired Sample Test statistical test obtained a p value (0.000) for systolic and (0.019) for diastolic, meaning that there was an effect of foot soaks with warm water on blood pressure before and after foot soak therapy with warm water. Before foot soak therapy with warm water, the majority were susceptible to the average systolic blood pressure of the elderly pretest and systolic posttest of 11,116, and after foot soak therapy with warm water, there was a change in the blood pressure of the elderly hypertensive, the majority of which were obtained with an average diastolic blood pressure pretest and diastolic posttest of 9.97. Where after the Paired T Test was conducted, the results obtained were p value = 0.000 (p <0.05), indicating that there is an effect of soaking feet with warm water on reducing blood pressure in elderly hypertensive patients.

The results of the Gresty N. M Masi (2017) study based on the Friedman test showed that P-value = 0.689> (α = 0.05), so there is no difference between the results of systolic blood pressure after foot soaking therapy with warm water O2, O3, O4. Based on the Wilcoxon test, there is an effect before and after foot soaking therapy with warm water on reducing blood pressure (P-value = 0.000). (Masi & Rottie, 2017). Reny Chaidir's Research Results (2022) showed that the average decrease in systolic blood pressure before and after warm water foot soak therapy intervention was 10 mmHg and the decrease in diastolic blood pressure before and after warm water foot soak therapy intervention was 9 mmHg. Foot soak therapy using warm water with a temperature of 40oC above the ankles which is carried out for 20 minutes can lower blood pressure,

relieve joint pain, reduce muscle tension, dilate blood vessels, kill germs, eliminate odors and can also improve sleep quality for the elderly (Harnani & Axmalia, 2017). Prevention and treatment of hypertension takes a long time and treatment that lasts a lifetime. Pharmacological treatments, hypertension can be treated with various alternative treatments such as warm water foot soak therapy (hydrotherapy) (Ulinnuha, 2018).

Handover is one of the activities providing nursing care provided must be in accordance with house standards pain so that the implementation process and results can be assessed. Nurse in carrying out mandatory nursing practice provide complete, honest, information correct, clear and easy to understand regarding nursing actions to clients and/or his family is within limits authority (RI Law No. 38, 2014). Hand over is a very important process in the implementation of nursing care because it is related to patient safety and continuity of nursing care to patients. Handover (patient handover) is the process of transferring the main authority and responsibility for providing clinical care to patients from one care provider to another to ensure continuity of care through the process of exchanging information and transferring responsibility for patient care (Riedel & Ayala, 2017) .

Supervision of the head of the room as an effort to maintain the quality of care, compliance with procedures and guarantee better nursing services. Supervision activities are planning, organizing, actuating and controlling. Being a supervisor is an inherent role and if this activity is carried out well it will have a positive impact and satisfaction, not only for the supervisor himself but for the room nurses and patients. (Maria Haryati, 2019). Research conducted by Adriana Hada PhD candidate, MN, RN et al (2020) shows that guidance interventions carried out by leaders, role models carried out by leaders and the provision of material about handovers are effective in increasing patient safety by reducing the number of falls and the rate of pressure injuries. , and medication errors. The implication is that implementation of strategies or changes in care practices can have a positive impact on quality of care and patient safety in acute care settings. With adjustment for differences across wards, these results provide a strong basis for supporting continuity and improvement of care practices. So that the research can be applied in nursing practice.

Subsequent research conducted by Dewi Brown-Deveaux, DNP ect (2020) overall, the results showed positive support from nurses for the implementation of bedside handover. Improvements in preference, perceived efficiency, and benefits to patients and

communications suggest that this method may be a valuable option. However, challenges such as privacy concerns and shift overlap remain a focus for further improvement in efforts to improve care practices. Dewi stated that the main strength of this project was empowering several high-performing nurses to become agents of change. These nurses served as leaders in developing and disseminating project goals to their colleagues.

Warm water soak therapy is a non-pharmacological therapy that can lower blood pressure. The benefits provided by warm water foot soak therapy can overcome fever, overcome pain, improve fertility, relieve fatigue, increase the body's immune system and is also useful in facilitating blood circulation (Ulinnuha, 2018). Foot soak therapy is a therapy that makes to improve blood circulation by widening blood vessels so that more oxygen can be delivered to the tissue that causes swelling (Wulandari et al., 2016).

CONCLUSIONS

Showing the distribution of warm water foot soaks on decreasing blood pressure in elderly patients after intervention, the results showed that after intervention, the blood pressure of elderly patients had a mean value of 1.75 (SD = 0.500) while in the control group the mean blood pressure had a mean value of 1.50 (SD = 0.577) with a p-value of 0.083 or greater than the significance value of p-value> 0.05, which means that there is no significant difference in the mean blood pressure between the warm water foot soak intervention group and the control group on decreasing blood pressure in the elderly in this study.

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