


Effectiveness of health education with booklet media on knowledge in pharmacological management of hypertension in the Pajang health center working area

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| Article Info | ABSTRACT |
|--|---|
| Keywords: Hypertension, Health Education, Booklet | Hypertension treatment management is an important action taken to prevent hypertension, but this is still often unknown by patients due to the lack of patient knowledge of good and correct hypertension treatment management, which has an impact on increasing the number of hypertension patients each year, for this reason, providing health education is needed to increase public knowledge about hypertension treatment management. The purpose of this study was to identify the effectiveness of health education with booklet media on knowledge in managing hypertension treatment in patients with hypertension. This type of research is quantitative with a quasi-experimental design with a non-randomized control group pretest-posttest design. The sample amounted to 46 people with diagnostic hypertension at the Pajang Health Center in Surakarta. The sampling technique uses accidental sampling. The intervention was carried out by making two groups selected based on predetermined criteria and then given a pretest to determine the initial condition, for the experimental group given treatment, namely health education with booklet media while the control group was not given treatment only given health education with explanation, after which a posttest was given to both groups. Knowledge about hypertension was measured using a knowledge questionnaire. Data were analyzed using the t-test. The results showed that there was a significant difference between the intervention group given health education using booklets and the control group given health education without using booklets ($p < 0.001$). So it can be concluded that there is an effectiveness of health education with booklet media on knowledge in pharmacological management of hypertension at Pajang Health Center. |
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INTRODUCTION

Hypertension is one of the leading causes of death in the world. It kills at least 8 billion people worldwide every year (Siswoaribowo, Hayati and Nurhanisa, 2023). Hypertension is a condition where there is a chronic increase in blood pressure (over a long period of time)

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which can cause pain to a person and can even cause death. A person can be suffering from hypertension if the systolic blood pressure is > 140 mmHg and the diastolic > 90 mmHg (Ainurrafiq, Risnah and Ulfa Azhar, 2019). The symptoms of hypertension are not very specific, causing some people not to realize that they have hypertension or think they have recovered from hypertension so they are not compliant with the hypertension treatment program provided (Agustina, AY Nursasi, 2023),

Based on the 2018 Riskesdas results, the prevalence of the population in Central Java Province with hypertension was 37.57 percent. The prevalence of hypertension in women (40.17%) is higher than that of men (34.83 percent). The prevalence in urban areas is slightly higher (38.11 percent) compared to rural areas (37.01 percent) (Aninda *et al.*, 2019). In Surakarta City, hypertension still occupies the largest proportion of all reported NCDs, which is 82.25 percent. The cases found in 2022 were 92,614 cases. There was an increase when compared to the number of cases in 2021 of 34,917 cases (Kementrian Kesehatan, 2022). In 2022, there were 2662 people with hypertension in the Pajang Health Center working area. This is because the level of education of the people in the city of Surakarta is still relatively low, causing a lack of public knowledge about the causes of hypertension and how to prevent hypertension properly. besides that, there is still a low awareness of the people in the city of Surakarta about the importance of a healthy lifestyle and the importance of taking hypertension medication regularly (Kementrian Kesehatan, 2022).

One of the efforts to achieve recovery is to carry out treatment for hypertension by obediently taking anti-hypertensive drugs every day according to the applicable drinking rules (Indriastuti *et al.*, 2021). Hypertension needs special attention from the community considering the impact caused both in the short and long term, one of which is the effort to deal with antihypertension with appropriate antihypertensive pharmacological therapy as a strategic step (Luh Sonya Astana Putri, Bagus Komang Satriyasa, 2019). So far, to overcome hypertension, various efforts can be made, one of which is by means of pharmacological therapy in the form of drug administration with types of antihypertensive medications including diuretics, beta blockers, adrenergic or beta-blockers, vasodilators, calcium channel blockers and angiotensin-converting enzyme (ACE) inhibitors (Agustina, AY Nursasi, 2023). Antihypertensive drugs are given in the long term to maintain stable blood pressure, but can cause Drug Related Problems (DRP), which are undesirable conditions that have the potential to interfere with the achievement of the patient's desired therapeutic goals, such as drug withdrawal, drug interactions, allergies to drugs recommended by the doctor (Iqbal and Handayani, 2022).

Public knowledge about management in hypertension is still lacking at this time. Health education is one of the ways used in increasing knowledge, health education is a process that can improve a person's health status. Health education can be given to all targets, but must use the right method so that the information that can be given is well received (Manto and Islamiaty, 2020). Health education can provide an assessment of hypertension knowledge, the importance of taking hypertension medication according to

rules and advice, and the importance of regularly checking blood pressure. The learning process will affect a person's knowledge and awareness to make changes or actions to maintain and improve health produced by health education (Maimunah, Tasalim and Hidayat, 2023). Therefore, patients need to be given education about hypertension so that hypertensive patients are able to manage hypertension independently (Herwanti, Sambriang and Kleden, 2021).

One of the efforts to improve knowledge is health education about hypertension. Utilization of media that can be used to support health education, namely booklet media. The advantages of booklet media, namely that it can be seen in terms of the costs incurred are quite cheap because it only uses printed media, the messages conveyed in the booklet media can be adjusted to the current situation because it can contain topics in detail and clearly and can further develop the messages to be conveyed .

METHODS

This type of research is quantitative with a quasi-experimental design with a non-randomized control group pretest-posttest design. The sample in this study amounted to 46 patients with a diagnosis of hypertension recorded at the Pajang Health Center in Surakarta with the criteria of age > 30 years and patients who were part of the prolanis activities at the Pajang Health Center. Side technique using accidental sampling.

The intervention was in the form of providing health education with a booklet and oral media conducted directly by researchers for 30 minutes about the symptoms of hypertension, causes of hypertension, treatment of hypertension and complications of hypertension. Knowledge about pharmacological management of hypertension was measured using a knowledge questionnaire consisting of 15 questions. In the questionnaire there are 2 types of questions, namely positive statements (favorable) and negative statements (unfavorable), with "correct" answers scoring 1 and "wrong" answers scoring 0. The questionnaire has been tested for validity and reliability, all questions are valid (>0.3610) with a Cronbach's alpha value of 0.728.

This study was conducted by making two groups selected based on predetermined criteria then given a pretest to determine the initial condition. The experimental group was given treatment by providing health education using booklet media while the control group was not given treatment only given health education using oral only. After that, a posttest was given to both groups. Each respondent was given informed consent and an explanation of the purpose of the study before the intervention. Data were analyzed using paired t-test. This research has passed the ethical approval with number: 151/KEPK-FIK/XII/2023 from the Health Research Ethics Committee of the Faculty of Health Sciences, Universitas Muhammadiyah Surakarta.

RESULTS AND DISCUSSION

This study was conducted to identify the effectiveness of health education provided directly to hypertensive patients registered in the Pajang Health Center prolanis activities.

Respondents in this study totaled 46 respondents with female gender totaling 39 respondents with a percentage of 84.8% having a higher number and percentage than male gender with 7 respondents and a percentage of 15.2%. The number and percentage of respondents' ages are mostly after 56-65 years with a total of 37 respondents and a percentage of 80.4%, while respondents with the lowest number and percentage of ages are at the age of > 65 years with a total of 4 respondents and a percentage of 8.7%. The number and percentage of education levels are mostly in elementary school with a total of 40 respondents and a percentage of 87%, while the number and percentage of respondents with the lowest level of education are SMA / SMK and Saranjana with a total of 1 respondent and a percentage of 2.2%. The number and percentage of occupations are mostly housewives with a total of 35 respondents and a percentage of 76.1%, while the number and percentage of respondents with the lowest level of education are civil servants with a total of 1 respondent and a percentage of 2.2%.

Table 1 Characteristics of Respondents (n=46)

| Category | N | F (%) |
|-----------------|----|-------|
| Gender | | |
| Male | 7 | 15.2 |
| Famale | 39 | 84.8 |
| Age | | |
| 46-55 years | 5 | 10.9 |
| 56-65 years | 37 | 80.4 |
| >65 years | 4 | 8.7 |
| Education Level | | |
| Elementary | 40 | 87 |
| Smp | 4 | 8.7 |
| Sma/smk | 1 | 2.2 |
| Bachelor | 1 | 2.2 |
| Jobs | | |
| Housewife | 35 | 76.1 |
| Sels-employed | 3 | 6.5 |
| Farmer | 3 | 6.5 |
| Civil servant | 1 | 2.2 |
| Not working | 4 | 8.7 |
| Total | 46 | 100 |

Based on the results of the analysis in table 2, it can be concluded that the intervention respondents before being given the treatment had a minimum value of 55, a maximum value of 75, and an average of 66.09. Intervention respondents who after being given treatment have a minimum value of 80, a maximum value of 95, and an average of 88.91. Control respondents who before being given the course had a minimum score of 55,

a maximum score of 75, and an average of 63.91. Control respondents after the treatment had a minimum score of 60, a maximum score of 80, and a mean of 73.04.

Table 2. Frequency Distribution Based on Knowledge Questionnaire in Hypertension Patients (n = 46)

| | N | Min | Max | mean | SD |
|----------------------|----|-----|-----|-------|-------|
| Pre-Test Eksperimen | 23 | 55 | 75 | 66,09 | 6.022 |
| Post-Test Eksperimen | 23 | 80 | 95 | 88,91 | 4.252 |
| Pre-Test Control | 23 | 55 | 75 | 63,91 | 6.022 |
| Post-Test Control | 23 | 60 | 80 | 73,04 | 4.940 |

Based on the results of the data in table 3, it is concluded that the intervention respondents have a sig value of <0.05, which means that there is an effect of intervention respondents before being given treatment on intervention respondents after treatment. For control respondents, the sig value is <0.05, which means that there is an effect of control respondents before treatment on control respondents after treatment.

Table 3. Mean Knowledge of Hypertension Patients Before and After Health Education

| | Post-Tes Eksperimen – Pre-Test Eksperimen | Post-Test Control - Pre- Tes Control |
|-------------------------|--|---|
| Z | -4.237 | -4.165 |
| Asymp. Sig. (2- tailed) | .000 | .000 |

Based on the data results in table 4, it can be concluded that the sig. (2 tailed) of 0.001 <0.05, which means that there is a significant difference and also an influence between intervention respondents who are given knowledge using booklets and control respondents who are given knowledge without using booklets. Thus it can be concluded that providing health education with booklet media is more effective than health education without using booklets.

Table 4. Effectiveness of Health Education with Booklet Media on Knowledge about Management of Hypertension

| | Mean ±SD | P Value |
|----------------------|------------|---------|
| Post-test experiment | 88.91±4.25 | 0.001 |
| Post-test control | 73.04±4.94 | |

Respondents in this study were mostly female, namely 39 respondents with a presentation of 84.4%, this is in line with research (Siwi and Susanto, 2020), from a total of 92 elderly respondents, 38 elderly people (41.3%) were male, 17 people (44.7%) had mild hypertension, 10 people (26, 3%) had moderate hypertension and 10 people (26.3%) had severe hypertension and 1 person (2.6%) had malignant hypertension, out of 54 elderly people (58.7%) who were female, 2 people (53.7%) had severe hypertension, 16 people (29.6%) had moderate hypertension, 8 people (14.8%) had mild hypertension and 1 person

(1.9%) had malignant hypertension. It appears that the number of people with hypertension is more in women than men. In this study, there were also many elderly respondents with elementary school education levels because in rural areas the education level for the elderly is still very low. Low education in the elderly affects the knowledge of those suffering from hypertension, which affects the elderly's knowledge of good and correct pharmacological management of hypertension, therefore the importance of providing health education to the elderly to increase respondents' knowledge of hypertension disease management. In Mubin et al's research on Patient Characteristics and Knowledge with Motivation to Perform Blood Pressure Control in the Sragi I Pekalongan Health Center Working Area. The results showed that patients with hypertension most often occurred at the age of 60 years, women, elementary school education, working as laborers / farmers and moderate knowledge. There is a significant relationship between knowledge and motivation to control blood pressure (Mardiana *et al.*, 2021).

In this study, the number and percentage of respondents' ages were mostly after 56-65 years with 37 respondents and a percentage of 80.4%. Hypertension will increase with increasing age. At the age of 25 to 44 years the incidence of hypertension reached 29%, at the age of 45 to 64 years it reached 51%, and at the age of over 65 years it reached 65%. The increasing incidence of high blood disease results in the number of deaths and the risk of complications will increase every year. The cause of this situation is because hypertension is still very high in low-income areas and occurs at an advanced age. the best solution is needed to overcome hypertension. the solution is expected to reduce the incidence of hypertension, reduce the risk of complications, and reduce the risk of cardiovascular disease (Rahmita Yanti, Harleni, 2022). Most of the respondents in the study were housewives, namely 35 respondents and a percentage of 76.1%. This is in line with research (Andini, Avianty and Nasution, 2019), namely from the 6 research factors that have been carried out, only 2 factors are related in this study, namely genetics producing a p-value = 0.18 which shows that there is a significant relationship between genetics and the incidence of hypertension. And the stress factor which has a p-value = 0.41 indicates that there is a significant relationship between stress factors and the incidence of hypertension in housewives.

In this study, there was an increase in respondents' knowledge of pharmacological management of hypertension after being given health education compared to before being given health education. Intervention respondents have a sig value of <0.05, which means that there is an effect of intervention respondents before treatment on intervention respondents after treatment. For control respondents, the sig value is <0.05, which means that there is an effect of control respondents before treatment on control respondents after treatment. This is in line with research conducted by (Setyowati and Wahyuni, 2019), it is known that the average decrease in systolic blood pressure is 7.5 mmHg, diastolic 4.00 mmHg after health education intervention for people with hypertension in the Majalengka Regency Health Office Working Area, with a value of 0.000 (systolic), value 0.000 (diastolic) <0.05. Based on these results it can be explained that there is an effect of health

education on blood pressure management in patients with hypertension in the work area of the Majalengka Regency Health Office. In research (Hidayat *et al.*, 2022), it is known that the results of statistical tests before and after being given health education show a p value of 0.000, where the alpha value <0.05 so that it is concluded that there is a significant influence between health education on knowledge of hypertension prevention. This further strengthens the statement that health education is effective for increasing the knowledge of hypertensive patients about the correct pharmacological management of hypertension for patients to reduce complications that can arise.

The results of this study indicate that after the treatment of hypertension health education using booklets in hypertensive patients experienced a more significant increase in knowledge in pharmacological management of hypertension, while the control group that did not get treatment only experienced a slight increase in knowledge of pharmacological management of hypertension. in table 4 it can be concluded that the sig. (2 tailed) of 0.001 <0.05 , which means that there is a significant difference and also an influence between intervention respondents who are given knowledge using booklets and control respondents who are given knowledge without using booklets. This is in line with research (Syamsia and Syafriati, 2022), From the results of knowledge research after giving booklets and obtained results that are very useful for respondents. Respondents began to understand about things related to hypertension. Booklets are given side by side with leaflets to help respondents understand more easily. The results of this study indicate an effect (pre-operative) with a significant value of the results of non-parametric statistical tests (wilcoxon) is 0.000 (pvalue 0.000 <0.05). Table 2 states that intervention respondents who before being given health education treatment using booklets had a minimum value of 55, a maximum value of 75, and an average of 66.09. Intervention respondents who after being given health education treatment with booklet media have a minimum value of 80, a maximum value of 95, and an average of 88.91. Control respondents before being given the course had a minimum score of 55, a maximum score of 75, and an average of 63.91. Control respondents who after being given the course had a minimum value of 60, a maximum value of 80, and an average of 73.04 from the above results prove that health education using booklet media is more effective in increasing knowledge of pharmacological management of hypertension. This is in line with research (Nurhidayati I, 2021), namely from the results of the intervention that has been carried out in Pucangsawit Village, it is known that the knowledge of the community who participated in the counseling has increased, it can be seen from the score of the 212 pretest (mean 7.53) and posttest (mean 11.63) results that have been carried out, there is an increase in scores so that it can be concluded that there is an effect of providing health counseling with booklet media on increasing community knowledge (p-value 0.000 <0.05).

CONCLUSION

Providing health education using booklet media is very effective in increasing the knowledge of hypertensive patients in the pharmacological management of hypertension.

This is because health education using booklet media can increase the knowledge of hypertensive patients with a significant value. We as nurses have an important role in providing effective health education, one of which is by using booklet media as one of the nursing interventions so that patients have good knowledge about hypertension. This strategy can also be used by health workers in providing health education to patients to increase efforts to manage hypertension in themselves for the management of hypertension.

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