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Flipchart Media Education in Increasing Knowledge and Attitudes of Hypertension Patients

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Abstract

Hypertension is a major problem among the elderly characterized by a high and increasing prevalence. However, the knowledge and attitudes of the elderly regarding hypertension are still relatively low. Flipchart education for elderly hypertension patients is one of the efforts to improve the knowledge and attitude of the elderly, as well as increase patient satisfaction with health services. This study aims to determine the effectiveness and impact of flipchart education on the knowledge and attitudes of hypertension patients in the elderly. This study is an experimental study using a quasi-experimental approach. The study population consisted of 136 elderly people diagnosed with hypertension. Sampling was carried out using non-probability sampling method with convenience sampling, namely selecting samples based on convenience and practicality. Data analysis was performed using bivariate analysis with paired sample T-test using SPSS Version 25 software. The results showed that before receiving flipchart education, the elderly had an average knowledge score of 11.43, which increased to 14.46 after the intervention. Similarly, the average attitude score increased from 45.82 before education to 64.70. The paired correlation results showed a significant p-value of 0.000 (<0.05). Education with flipchart media is effective and has a significant effect on increasing knowledge and attitudes in elderly people with hypertension.

INTRODUCTION

Hypertension is a major problem in the elderly where it has a high prevalence and continues to increase (Adam, 2019; Harsismanto et al., 2020). Elderly people suffer from hypertension as much as 22% of the world population, 30% in Africa, 18% in America, 49% in China and 61% in Korea (Arum, 2019; Larasati, 2021; Lee et al., 2019). Indonesia according to Basic Health Research data in 2018 was 45%, hypertension occurred over the age of 60 years by 55% (Putra & Susilawati, 2022). Hypertension if not treated seriously can become a complication in the elderly (Astari & Noviani, 2023; Fadila & Solihah, 2022; Sumartini & Miranti, 2019).

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Education is all planned efforts to influence other people, whether individuals, groups, or communities so that they do what is expected by the perpetrators of education (Adam, 2019; Sofiana, 2020). The purpose of health education according to Health Law No. 23 of 1992 is to increase the ability of the community to maintain and improve their physical, mental, and social health status so that they are economically and socially productive, health education in all health programs both eradicating infectious diseases, environmental sanitation, public nutrition health services and other health programs (Akbar, 2019).

One of the media that can be used to provide education to the elderly is Flipchart. Flipchart is one of the print media that is very simple and quite effective. Sheets of paper containing material in the form of neat or well-structured messages that are used as educational media about hypertension to the elderly (Lestari et al., 2024; Mutalazimah et al., 2021; Yuanta et al., 2023). Flipchart media displays images and explanations that are more interesting and easier for people to understand. Health education using flipcharts displays larger images and text than leaflets, this makes it easier for respondents to better understand and more easily remember what has been conveyed by the material carrier (Rochani & Pamboaji, 2022; Salam & Ruhmawati, 2023). Flipchart was chosen because it has advantages, including being able to present learning messages concisely and practically, can be used indoors or outdoors, materials and methods of manufacture are relatively easy and inexpensive, easy to carry everywhere.

Based on preliminary studies by researchers, the results of data from short work interviews at the Talaga Raya Village Health Center on May 22, 2023 that most of the elderly are very lacking in knowledge information about general health, especially hypertension. Ariyanti et al., (2020) explained that this condition is one of the causes of late treatment in patients with hypertension, because the majority of patients come to health facilities when complications have occurred due to hypertension. Patients with hypertension are a serious problem and always cause anxiety due to ignorance about causative factors, complications and ways of treatment and prevention (Yuwono et al., 2018).

Based on this description, the researcher is interested in the effectiveness of providing flipchart education on knowledge and attitudes about hypertension in the elderly. The purpose of this study was to determine the effectiveness of providing flipchart education on knowledge and attitudes about hypertension in the elderly in the health center work area before intervention.

METHODS

This type of research is an experiment with a quasy experimental approach. Quasy experiment or pseudo-experiment is a type of experimental research where researchers provide treatment and examine changes or consequences of the treatment given (Andari et al., 2020; Listyaningsih et al., 2018; Rahmiati & Zurijah, 2020). The research design uses one group pretest-postest, which is an experimental research design in one group where an initial test is carried out before treatment and a final test is given after treatment. The research location will be carried out at the Talaga Raya Health Center, Talaga Raya District, Buton Regency, Southeast Sulawesi, Indonesia. Data collection time will be carried out starting June 2024. The population in this study were all elderly people suffering from hypertension as many as 136 elderly people. The sample in this study used Non-probability with Convenience Sampling, which is a sampling technique by considering the simplest or most economical sample (Nadhirah et al., 2023; Sutria & Insani, 2016; Yusuf et al., 2023).

The research tools or media used during education are counseling units and flipchart sheets. The instrument used in measuring knowledge is an instrument made by the researcher, in the form of a questionnaire with 2 options, namely correct with a value of 1 and wrong with a value of 0. The scores achieved from all question items are summed up then the scores are categorized into 3 criteria for knowledge level, namely Good (if the subject answers correctly 76%-100% of all questions), Fair (if the subject answers correctly 56%-75% of all questions) and Lack (if the subject answers correctly <56% of all questions).

The attitude instrument is an attitude questionnaire in the form of 15 questions consisting of answers to questions with 4 choices from the questionnaire, namely strongly agree with a score of 5, agree with a score of 4, less agree with a score of 3, disagree with a score of 2 and strongly disagree with a score of 1. The variables in this study include knowledge and attitudes of hypertension patients. Variables about hypertension knowledge based on indicators of hypertension definition, pharmacological therapy, non-pharmacological therapy, compilation, and adherence to taking hypertension medication. Variables on the attitude of hypertensive patients based on indicators of self-monitoring, lifestyle changes, and medication adherence. The assessment of knowledge and attitude variables is contained in the questions arranged in the questionnaire.

This study uses pearson correlation to test validity. Determining whether an item is valid or not is used is a significant test of the correlation coefficient with a significant level of 0.05 (significance of 5% or 0.05 is a standard measure used in research). The validity test was carried out twice to get the expected results. In the first validity and reliability test on 20 respondents, the p-value for each question was 0.000 (smaller than 0.05) and the *r* count (pearson correlation) was positive so that of the 15 questions tested, all were valid.

Reliability value is a measure that shows the measuring instrument has reliability as a measuring instrument. Measurement results from time to time do not change. The value used is *alpha cronbach's* value to measure the maturity of the question items. The reliability results of 15 valid questions obtained an alpha value (α) of 0.986 < 1.00, so that the questionnaire is declared reliable and suitable for use as a data collection instrument. The variables in this study consisted of independent variables (knowledge and attitude of hypertensive patients) and dependent variables (provision of Flipchart education). This research procedure is shown in figure 1.

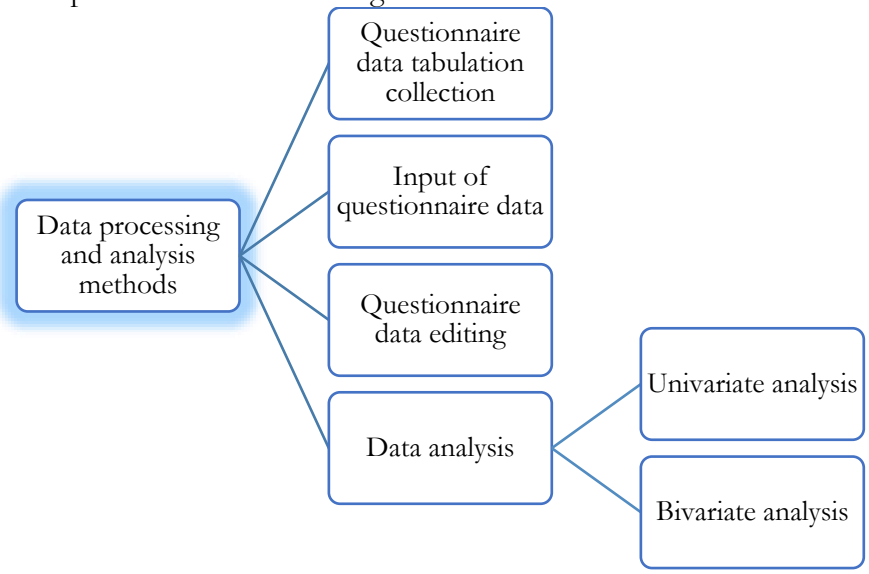

Fig 1. Procedure of research methods and data processing

There are two data analysis methods used in this study, namely univariate analysis and bivariate analysis. Univariate analysis aims to describe the characteristics and research variables. The data were organized descriptively by calculating the frequency distribution and percentage to determine each variable. Then bivariate analysis in this study with the test can be done without first doing a normality test. Normality test results were obtained from the pre-test with a statistical value of 0.201 and a p-value of 0.104, so the pre-test data was normally distributed (p> 0.05). Then, from the post-test value, the statistical value is 0.174 and the p-value is 0.200, so the post-test data is normally distributed (p>0.05).

To find out whether the residuals are normally distributed or not, it can be done by comparing the p-value with a significance level of 5%. If the p-value is greater than 0.05, it is concluded that the variable is normally distributed (reject H_0) and vice versa. All data was then analyzed using descriptive and correlation techniques using SPSS Version 25 software.

RESULT AND DISCUSSION

The following is a description of the knowledge and attitude of hypertension in the elderly before and after flipchart education in diagram 1.

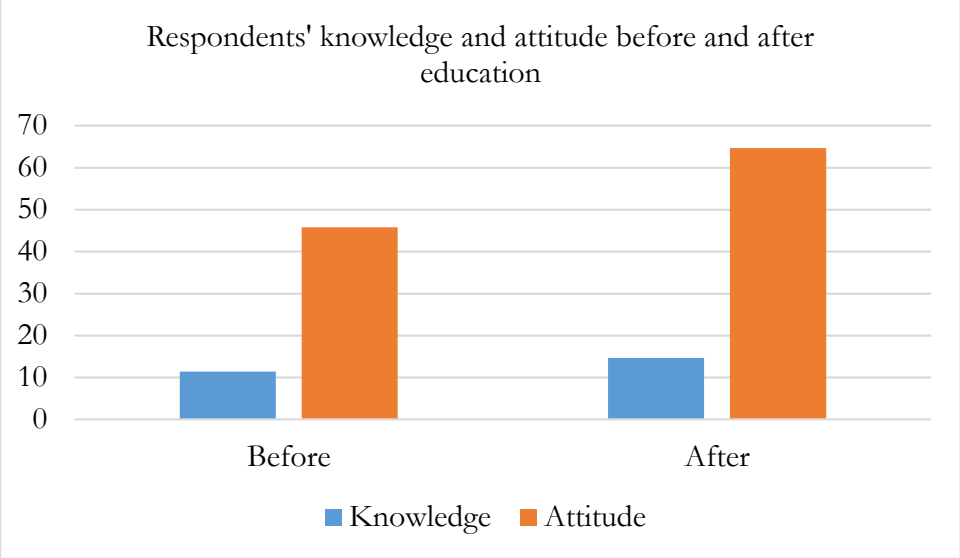

Diagram 1. Respondents' knowledge and attitude

Based on diagram 1, the knowledge of respondents before giving flipchart education mostly had knowledge with an average of 11.43, while after giving flipchart education, the average respondent had increased knowledge, namely with an average score of 14.44. This shows that flipchart education increases the average knowledge of respondents and respondents have gained effective knowledge from flipchart education. Based on diagram 1 above, the attitude of respondents before flipchart education was carried out, most of them had an average score of 45.82, while after flipchart education, most respondents had an increase in the average score of 64.70. This shows that respondents have gained very effective knowledge and attitudes from providing flipchart education.

Statistical tests to determine the effect of flipchart education on the knowledge of hypertensive patients were carried out *pair t-test*. *Paired t-Test* is a parametric test that can be used on two paired data. The purpose of this test is to see if there is an average difference between two samples that are paired or related. Table 1 shows the results of the *pair t-tests* as follows.

Table 1. Paired Statistics & Correlations

		Mean	N	Standard Deviation	p
Pair 1	Before	11,43	136	1,233	0,000
	After	14,46	136	0,574	

Based on table 1 above, the knowledge of hypertensive elderly before being given flipchart education shows a mean value of 11.43. The average value of knowledge of elderly hypertension after being given flipchart education is 14.46. The average value before < average value after, so there is a difference in knowledge before education and after education in the form of increased knowledge. The results of *paired correlations* $p = 0.000$ (<0.05) indicate the effect of flipchart education on increasing knowledge.

Statistical tests to determine the relationship of flipchart education to the attitude of elderly hypertension conducted pair t-tests. Table 2 shows the results of the pair t-test test as follows. Based on table 2, the attitude of hypertensive patients before being given flipchart education shows an average value of 45.82. The average value of the attitude of hypertensive elderly after being given flipchart education is 64.70. The mean value before < the mean value after, so there is a difference in attitude before being given education and after being given education in the form of attitudes as hypertensive elderly. The results of *paired correlations* $p = 0.000$ (<0.05) show the effect of flipchart education on improving the attitude of the elderly.

Table 2. Paired Statistics & Correlations

		Mean	N	Standard Deviation	p
Pair 1	Before	45,82	136	5,368	0,000
	After	64,70	136	7,425	

Health counseling or health education is a tool that can be used to improve people's knowledge about health. Several studies have found that health education is very effective in improving respondents' knowledge. Health education can be delivered through various media. Effective media will make it easier for respondents to quickly accept the information conveyed (Herniwanti et al., 2020; Rismawati, 2019). The use of media is expected to be a tool for information providers so that the information conveyed is well received by participants (Yuanta et al., 2023). Several studies have shown that there are significant changes after health education using flipchart. The results showed that in the group given health education using flipcharts increased from a mean value of 15.66 to 22.31. The results of research by Rochani & Pamboaji, (2022) explained that the description of the knowledge and attitudes of respondents increased after being given health education using flipchart.

Education is an essential component directed at improving, maintaining, restoring health status, preventing disease, helping individuals to overcome the residual effects of disease. Through this education, patients can find out what factors affect hypertension, its dangers and the right way to deal with it (Hidayati, 2018; Pujianti et al., 2021). This will indirectly change the patient's attitude and the way the patient maintains their health. Flipchart education helps patients understand their disease so that they can avoid things that can raise blood pressure and trigger hypertension (Salam & Ruhmawati, 2023).

The intervention of an educational flipchart is one of the developments in knowledge and sensing of certain objects. Knowledge is a learning process, a process of sensing or the view of every human being towards objects that include knowledge or cognitive, which is dominant, which is very important to build the concept of the formation of a person's character to act (Fakhriyah et al., 2022). A person's knowledge about hypertension is one of the factors that

influence the occurrence of high blood pressure increases. With increasing one's knowledge about hypertension, it is hoped that respondents will follow the advice given during the intervention (Sofiana, 2020; Yuanta et al., 2023).

Attitude is an expression of what a person feels in relation to an object either liked or disliked. The attitude that arises from a person is also a description of his beliefs about something related to the usefulness of what he receives or feels (Rismawati, 2019). Attitude is also an expression or behavior of feelings that arise about what a person likes or dislikes. The patient's attitude or behavior in maintaining his health also includes maintaining an appropriate diet and avoiding taboos that can increase blood pressure (Aprillia, 2020). For hypertensive disease, especially by the elderly, maintaining food is the most important thing in stabilizing health (Yuwono et al., 2018).

The elderly period is a phase of decreased physical endurance, making them vulnerable to diseases that can cause death. The cause of hypertension is closely related to lifestyle and diet has a major effect on triggering hypertension, especially in the elderly (Purwono et al., 2020; Rehena & Nendissa, 2021). There are several factors that are at risk for hypertension, such as age, gender, smoking, and a sedentary lifestyle that can lead to obesity (Indriawati & Usman, 2018). Efforts to minimize symptoms of hypertension with beneficial activities are steps in helping the elderly prevent hypertension (Astutiatmaja et al., 2024). Reducing these risk factors is the basis for providing interventions by health workers.

CONCLUSION

Based on the results of the study, it can be concluded that the flipchart education intervention has a difference between before and after the intervention in the elderly. Flipchart education on attitudes and knowledge in the elderly has proven effective in improving the attitudes and knowledge of hypertensive patients. The development of educational media for the elderly using flipcharts can be further developed using methods, educational components that can support physical activity in hypertensive patients.

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