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THE EFFECT OF HEALTHY LIFESTYLE EDUCATION ON THE LEVEL OF KNOWLEDGE OF HYPERTENSION CONTROL IN THE ELDERLY IN GBI BUKIT PENGHARAPAN KEDIRI

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ABSTRACT

Hypertension is a silent killer with long-term and dangerous impacts if left untreated. Prevention can be achieved through a healthy lifestyle. This study aimed to determine the effect of healthy lifestyle education on knowledge of hypertension control in the elderly. This was a quasi-experimental study with a one-group pretest-posttest design, involving 45 elderly students aged 60-79 years selected using purposive sampling. Data were collected through questionnaires and analyzed using frequency distribution and the Wilcoxon test. After receiving education, all respondents (100%) demonstrated good knowledge of hypertension control. The statistical test showed a p-value of 0.000 (<0.05), indicating a significant change in respondents' attitudes. Providing education on healthy lifestyles has been shown to have a positive effect on knowledge of hypertension control in the elderly at GBI Bukit Pengharapan in 2026. The elderly are encouraged to adopt a healthy lifestyle by exercising regularly, maintaining a balanced diet, limiting salt, and managing stress to prevent hypertension early.

Keywords: *Education, healthy lifestyle, knowledge, hypertension prevention, elderly*

INTRODUCTION

Hypertension often has no symptoms, so it's only detected after it has caused organ damage, such as heart failure or stroke. If left untreated for a long time, hypertension can increase the risk of stroke, heart attack, heart failure, kidney damage, chronic kidney failure, and even blood vessel rupture, which can lead to sudden death. (Sukmawaty, 2021).

The World Health Organization states that more than 1.13 billion people worldwide have hypertension. The high global incidence of hypertension is closely linked to unhealthy habits such as excessive salt consumption, an unbalanced diet, and lack of physical activity (Hypertension et al., 2024).

The 2023 Indonesian Health Survey (SKI) reported that the prevalence of hypertension among people aged 18 years and older decreased from 34.1% in 2018 to 30.8% in 2023. Although the prevalence of hypertension is trending downward, there remains a gap of approximately 20% between the prevalence based on doctor's diagnosis (22.9%) and the

prevalence based on blood pressure measurements (33.9%) in the age group 60 years and older. This gap highlights the need to increase public awareness of hypertension status as a preventative measure to prevent complications.

By province, the highest prevalence of hypertension is in Central Kalimantan at 40.7% and the lowest in North Maluku at 22%. East Java ranks fourth with a prevalence of 34.3%. Globally, 46% of adults with hypertension are unaware of their condition, and only 42% are diagnosed and treated.

Approximately 21%, or one in five adults with hypertension, can control it. In Indonesia, controlled hypertension is defined by Minister of Health Regulation No. 13 of 2022 as systolic blood pressure <140 mmHg and diastolic blood pressure <90 mmHg during a one-year examination, with at least three months remaining. The national target for controlled hypertension is 63% by 2023 and 90% by 2024. In 2023, the proportion of controlled hypertension in Indonesia was 18.9%, with the highest rate in Central Papua at 39.7% and the lowest in Central Kalimantan at 12.6%. Meanwhile, East Java Province ranked 31st out of 38 provinces with a rate of 16.3%. 2 In Kediri City, in 2023, the Minimum Service Standards (SPM) for health services for hypertension patients reached 100%. Despite very high service coverage, only 33% of hypertension patients were under control, far below the national target of 63%. The low achievement of hypertension control is due to the majority of people being unaware that they have hypertension, underestimating it, and leading an irregular lifestyle. This condition triggers complications such as heart disease, stroke, and kidney disease. Although hypertension cannot be cured, it can be prevented or managed by regularly taking medication to maintain controlled blood pressure and prevent complications. Therefore, it is crucial for people with hypertension to have a high level of knowledge in hypertension control efforts. Furthermore, adopting a healthy lifestyle is also crucial to improve quality of life, such as quitting smoking, consuming a healthy diet, maintaining a healthy weight, exercising regularly, and managing stress.

The high prevalence of hypertension demonstrates the need for effective prevention and control efforts, especially in the elderly, who are at higher risk of complications. One strategy is to provide ongoing health education regarding healthy lifestyles in the community. This education is expected to improve the elderly's knowledge of managing hypertension. Therefore, researchers are interested in conducting a study entitled "The Effect of Healthy Lifestyle Education on the Level of Knowledge of Hypertension Control in the Elderly at GBI Bukit Pengharapan Kediri.".

This study employed a quantitative approach with a quasi-experimental design using a One Group Pretest–Posttest Design. This design was used to determine the effect of providing healthy lifestyle education on the level of knowledge about hypertension control in the elderly through measurements before (pretest) and after (posttest) the intervention. The study was conducted at GBI Bukit Pengharapan Kediri from June 20-30, 2026. The study population was all 45 elderly people who participated in health services at GBI Bukit Pengharapan Kediri and had a history of hypertension. Sampling was conducted using a purposive sampling technique, selecting respondents based on specific criteria aligned with the study objectives. Inclusion criteria included: (1) elderly aged ≥60 years, (2) diagnosed with hypertension by a health professional or having a history of hypertension, (3) able to communicate well, and (4) present at the pretest, education, and posttest. Exclusion criteria

included elderly with severe cognitive impairment, hearing or communication disorders that hindered the questionnaire completion process, and respondents who did not participate in the entire study. The intervention consisted of healthy lifestyle education delivered by the research team using interactive lectures, discussions, question-and-answer sessions, and PowerPoint presentations. Educational materials included the definition of hypertension, risk factors, complications of hypertension, healthy eating patterns, salt restriction, appropriate physical activity for the elderly, smoking cessation, and the importance of regular blood pressure checks. The education was conducted in two sessions, each lasting approximately 60–90 minutes, with a one-week interval. Evaluation was conducted via a posttest one week after the final education session to assess changes in respondents' knowledge and behavior. The research instrument consisted of two questionnaires. Knowledge levels were measured using questionnaires developed based on the hypertension management guidelines from the Indonesian Ministry of Health, covering aspects of hypertension definition, risk factors, complications, treatment, physical activity, diet, and prevention. Data collection was conducted in three stages: (1) administering a pretest to measure knowledge of hypertension control before the intervention, (2) providing healthy lifestyle education based on the prepared materials, and (3) administering a posttest using the same instrument after the intervention was completed. Data analysis was performed using the Statistical Package for the Social Sciences (SPSS). Univariate analysis was used to describe the characteristics of respondents, including age, gender, education level, occupation, knowledge level, and hypertension control behavior in the form of frequency distributions, percentages, and averages. Bivariate analysis was conducted to determine the effect of education on changes in knowledge levels.

RESULT AND DISCUSSION

Respondent Characteristics

Table 1 Respondent Characteristics

No	Characteristics	Frequency	Percentage	Total
1	**Gender**			**45**
	a. Male	19	42,2%	100%
	b. Female	26	57,8%	
2	**Age**			**45**
	a. 60-69	26	57,8%	100%
	b. 70-79	19	42,2%	
3	**Most Recent Education**			**45**
	Elementary School/Equivalent	12	11,1%	100%
	Junior High School/Equivalent	5	26,7%	
	Senior High School/Equivalent	11	24,4%	
	College	9	20,0%	
	No Schooling	8	17,8%	
4	**Occupations**			**45**
	Housewife	20	44,4%	100%
	Farmer	8	17,8%	
	Private Sector/Self-Employed	7	15,6%	
	Civil Servant/Military/Police	2	4,4%	
	Other	8	17,8%	

In this study, most respondents suffering from hypertension were female, with 26 respondents (57%). The age characteristics of the respondents showed that the majority were aged 60-69 years, with 26 respondents (57.8%). The characteristics of the respondents' last education showed that most respondents had elementary school education or equivalent, with 12 respondents (11.1%). The characteristics of the respondents' occupations showed that the majority were housewives, with 20 respondents (44.4%).

Univariate Analysis of Hypertension Knowledge Level

Table 2 Elderly Knowledge Level Before Education (Pretest)

No	Knowledge Level	Frequency	Percentage
1	Very Good	4	8,9%
2	Good	29	64,4%
3	Adequate	8	17,8%
4	Not Enough	4	8,9%
	Total	**45**	**100%**

The research results show that the level of knowledge of the elderly regarding hypertension shows that most respondents have a good level of knowledge, namely 29 respondents (54.1%).

Table 3 Level of Knowledge of the Elderly After Education

No	Knowledge Level	Frequency	Percentage
1	Very Good	16	35,6%
2	Good	22	48,9%
3	Adequate	7	15,5%
4	Not Enough	0	0,0
	Total	**45**	**100%**

Table 3 shows an increase in knowledge about hypertension after the education program. Before the intervention, four elderly people (8.9%) had poor knowledge. After the intervention, most respondents were in the good category (22 elderly people (48.9%) and very good (16 elderly people (35.6%).

Bivariate Analysis

Table 4 Effect of Education on Elderly Knowledge Levels (n=45)

No	Variable	Mean ± SD	Mean Difference	t	p-value
1	Knowledge Before Education	63,31 ± 10,28	-	-	-
2	Knowledge After Education	84,67 ± 6,35	16,36	-16,36	< 0,001

Based on the results of bivariate analysis using the Paired Sample t-test, the average knowledge score of the elderly before being given education was 68.31 ± 10.28, while after being given education, it increased to 84.67 ± 6.35. The average increase in knowledge score was 16.36 points. The test results showed a t value = -16.36 with p <0.001, so it can be concluded that there is a significant influence of healthy lifestyle education on the level of knowledge of the elderly in controlling hypertension.

Discussion

Overview of Knowledge about the Importance of Hypertension Prevention Before Education for the Elderly at GBI Bukit Pengharapan Kediri in 2025

The results showed that half of the respondents (29 respondents) had a fairly good attitude before being educated about hypertension prevention. Research conducted by Oftacyananda (2020) found that 50.8% of respondents had a good attitude toward hypertension prevention, while 49.2% had a poor attitude toward hypertension prevention. Hypertension prevention can be achieved through various methods, including regular blood pressure checks, maintaining an ideal body weight, not smoking, avoiding excessive salt intake, exercising regularly, reducing stress, engaging in physical activity, and not consuming alcohol (Agung, in Untari et al., 2023). Another study conducted by Ashari & Maria (2021) found a relationship between knowledge level and family support on hypertension control behavior, with p-values of 0.000 and 0.003, respectively.

A description of attitudes about the importance of hypertension prevention after education was provided to the elderly at GBI Bukit Pengharapan Kediri in 2026.

The results showed that all respondents had good knowledge after receiving education on hypertension prevention, with 22 respondents (48.9%). Research conducted by Maulianti & Herdhianta (2022) found an average knowledge score of 90.00 after receiving health education using leaflets. The education provided clear and detailed information about hypertension, its causes, impacts, and prevention methods. This improved knowledge enables the elderly to understand the importance of maintaining health, including preventing hypertension. Education can increase elderly awareness of the health risks that can arise from unhealthy lifestyles, such as hypertension.

The effect of providing healthy lifestyle education on knowledge for controlling hypertension in the elderly at GBI Bukit Pengharapan Kediri in 2026.

The research results obtained a p-value = 0.000 (<0.05), meaning that there is an influence of providing healthy lifestyle education on the knowledge of the elderly in controlling hypertension in the elderly at GBI Bukit Pengharapan Kediri in 2026.

Research conducted by Maulianti & Herdhianta (2022). The results of the research obtained from statistical tests obtained Sig. 0.000 < α= 0.05, so it can be concluded that there is an influence of health education on attitudes about preventing hypertension in MA Biharul Ulum Ma`Arif students. Health education is a collection of experiences that support habits, attitudes and knowledge related to individual, community and racial health (Agustina, 2022).

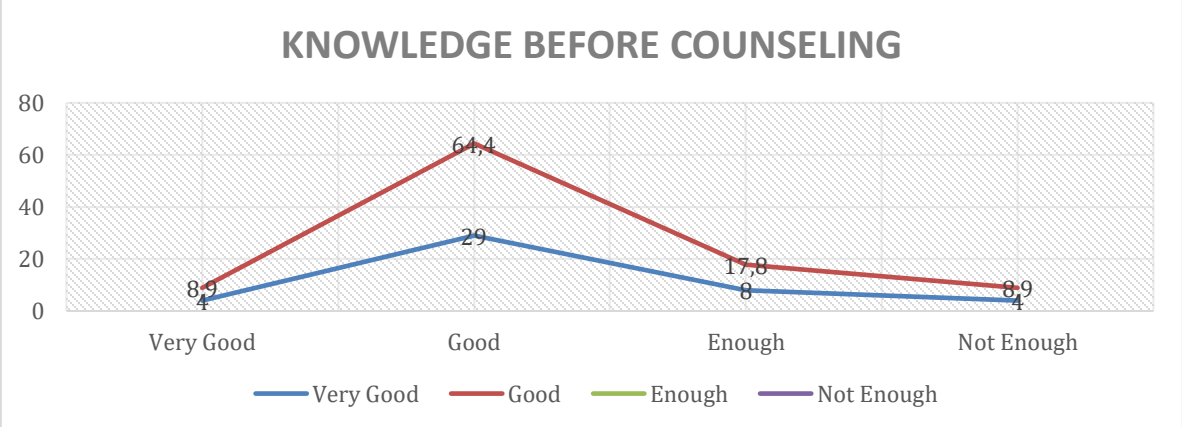

Figure 1 Percentage of knowledge regarding hypertension prevention before counseling was carried out

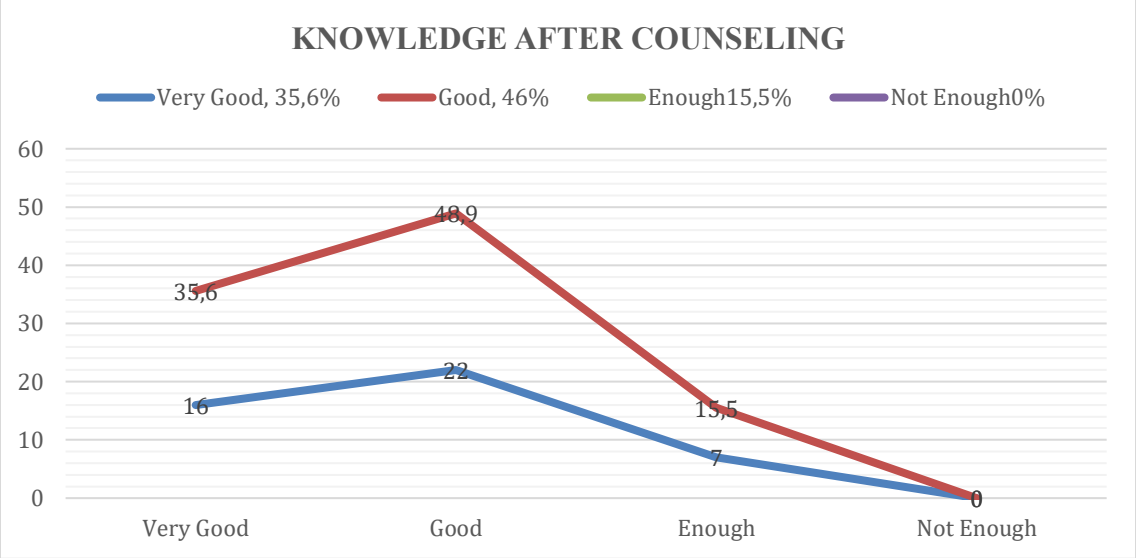

Figure 2 Presentation of knowledge on hypertension prevention after counseling

CONCLUSION

A description of knowledge about the importance of hypertension prevention before education was provided to the elderly at GBI Bukit Pengharapan Kediri shows that half of the respondents had a fair amount of knowledge. A description of knowledge about the importance of hypertension prevention after education was provided to the elderly at GBI Bukit Pengharapan Kediri shows that all respondents had a good amount of knowledge. There was a significant effect of providing healthy lifestyle education on knowledge about hypertension prevention among the elderly at GBI Bukit Pengharapan Kediri in 2026.

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