

# THE EFFECT OF HEALTH PROMOTION WITH LEAFLET MEDIA ON INCREASING KNOWLEDGE OF HYPERTENSION PREVENTION IN THE ELDERLY

Yuseran <sup>1</sup>

<sup>1</sup>. University of Light of the Nation Banjarmasin

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## Abstract

**Background:** Good knowledge can increase the quality of life of hypertension sufferers by doing control with health promotion. **Objective:** This study was conducted to determine the influence of health promotion with leaflet media on increasing knowledge of hypertension prevention in the elderly. **Research Method:** This study used the Quasi Experiment method with the Nonequivalent Control Group Design Pretest-posttest. The sample used a descriptive formula. Dahlan's categorical data of 97 elderly aged 46-65 were divided into intervention and control groups. Data collection using questionnaires. **Results:** Univariate results showed that most respondents were categorized as early elderly (46-55 years) at 63.9%, type sex women at 68%, and basic education at 37.1%. The results of the bivariate test using non -non-parametric with statistical tests using Mann-Whitney U showed a value of Asymp.Sig. (2-tailed)  $0.000 < 0.05$  means a difference in knowledge of the intervention group before and after health promotion and the Wilcoxon Test with a value of Asymp.Sig. (2-tailed)  $0.000 < 0.05$ , which means There is an influence difference in knowledge of the intervention group and the control group after health promotion. **Conclusion:** Health workers are expected to be able to provide health education for older people using appropriate media.

**Keywords:** Elderly Hypertension, Health Promotion, Knowledge Level

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## Background

World Health Organization (WHO) data from 2015 shows that around 1.13 billion people in the world suffer from hypertension, meaning 1 in 3 people in the world are diagnosed with hypertension. It is estimated that by 2025, there will be 1.5 billion people affected with hypertension, or an estimated 9.4 million people die every year as a consequence of hypertension and its complications. Hypertension with complications (5.3%) is the cause 5th death at all ages (Sample Registration System or SRS, 2014 in the Indonesian Ministry of Health, 2019).

2018 Riskesdas data recorded the prevalence of hypertension based on measurement results in the population aged >18 years at 34.1%, with the highest data in South Kalimantan (44.1%) while lowest in Papua (22.2%). Hypertension in the age group 45-54 years (45.3%), age 55-64 years (55.2%). From the prevalence of hypertension of 34.1%, it is known that 8.8% were diagnosed with hypertension, 13.3% of people diagnosed with hypertension do not take medication, and 32.3% of people diagnosed with hypertension do not take

medication regularly. The data shows that most sufferers of hypertension feel he is healthy or does not know that he has been diagnosed with hypertension.

Black & Hawks (2014) stated that family history, age, gender, and ethnicity are factors. The risk of hypertension cannot be changed, but diabetes, stress, obesity, diet, and drug abuse are factors—modifiable risks. Meanwhile, Lewis, Bucher, Heitkemper, and Harding (2017) stated that one of the factors risk hypertension is a social status economy, where those who have social status low socioeconomic status and knowledge have a greater chance of being affected by hypertension.

Hypertension can occur in someone who has become elderly. The Indonesian Ministry of Health (2009) categorizes the elderly age, namely early elderly aged 46-55 years, late elderly aged 56-65 years, and elderly aged >65 years. The Indonesian Health Data and Information Center in 2017, the results stated that the number of older women as many as 12,418,456 people and the number of older

men as many as 11,239,749 people, or the total number of older adults in Indonesia is 23,658,214 people.

One approach to control hypertension in the elderly is by increasing education. Lolita et al . (2015) found that the increased awareness to reduce the amount sufferer hypertension through counseling in the form of education using leaflet media door to door in the community, from the data obtained, the results of the knowledge score before health promotion was carried out, the average value of the knowledge score of  $40.97 \pm 19.21$  and after health promotion was carried out it was  $90.65 \pm 13.65$  with a p-value = 0.000 at the level 95% confidence. The study results concluded that there was a significant influence on health promotion activities carried out. This study is also in line with the results of Sarlinda's research (2018), the results obtained for the variable visit  $p$  value  $(0.019) < \alpha (0.05)$  and variable knowledge  $p$  value  $(0.031) < \alpha (0.05)$ , so it can be concluded that there is influence counseling nutrition towards improvement knowledge and visits to older people. Fitriani (2011) stated that the methods and techniques of health promotion are often used to expand knowledge through education, especially many media that can be channeled with the help of such as audiovisual through films and movies, oral through radio, print through posters and pamphlets, and visual through flip charts.

The interview results with the Head of PKK (2020) stated that the number of older adults divided into 10 RTs was 432. From the data results obtained by researchers when conducting measurement of blood pressure in 97 older adults, the results showed that 16 older adults, or 16.5% of older adults, had normal blood pressure, 37 older adults or 38.1% of older adults had high blood pressure hypertension, as many as 31 elderly or 32.0% of elderly have blood pressure with the category of grade I hypertension and as many as 13 elderly or 13.4% of elderly have blood pressure with the category of grade II hypertension. The researcher concluded that the elderly had never followed counseling on hypertension.

From the data results above, there is still a need for an approach through health education for elderly patients with hypertension to understand better the importance of knowledge about hypertension suffered. One method of giving information about hypertension is health education. Health education is expected to make the elderly more knowledgeable, understand,

comprehend, and Want to implement a compliant hypertension diet. Therefore, researchers are interested in conducting further research on the influence of health promotion with leaflet media to increase knowledge of preventing hypertension in the elderly.

## Method

The study was conducted on April 27-30, 2020, using the Quasi-Experimental Nonequivalent Control Group Design pre-posttest method. Before starting treatment, both groups took a pretest to measure their initial knowledge level. Next, the experimental group was given treatment (X), and the comparison group ( control group ) was not given treatment. Then, both groups conducted a posttest to measure the level of knowledge. The population in this study was older men or women aged 46-65 years. Determination The sample in this study used a descriptive formula. Researchers obtained Dahlan's (2010) categories by coming to respondents door to door and looking for respondents according to the specified criteria. Data was taken using primary data from a questionnaire by Firdayani Ginting (2010), which was standardized with a validity test result of 100% and a Cronbach's Alpha value of 0.702. Data were analyzed using the Mann-Whitney U Test and Wilcoxon Test. This study has passed the ethical test with No. 085 / KEPPKSTIKSC / XII / 2019.

## Results and Discussion

### Results

Table 1. Frequency Distribution of Respondent Characteristics

Variables	Amount	(%)
Age		
Early elderly (46-55 years)	62	63.9
Late elderly (56-65 years)	35	36.1
Gender		
Man	31	32.0
Woman	66	68.0
Level of knowledge		
SD	36	37.1
JUNIOR HIGH SCHOOL	20	20.6
SENIOR HIGH SCHOOL	33	34.0
College	4	4.1
No school	4	4.1

Table 1 shows the distribution frequency characteristics. The 97 respondents indicated that the majority of older adults were in the early elderly category (46-55 years), namely as much as 63.9%, gender Woman as much as 68%, and the education of the majority of older adults in elementary school graduates, namely as much as 37.1%.

Table 2. Frequency Distribution of Knowledge Level of Respondents in the Pretest-Posttest Intervention Group

Variables		Frequency	(%)
<i>Pre Test</i> Level of knowledge	good (76%-100%)	56	76.7
	sufficient (56%-75%)	16	21.9
	less (<56%)	1	1.4
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<i>Post Test</i> Level of knowledge	good (76%-100%)	73	100.0

Table 2 shows that the majority of respondents, consisting of 73 older adults in the pretest intervention group, had a level of knowledge in the good category (76%-100%), namely as much as 76.7%, while in the posttest intervention group, the majority level Elderly knowledge is in the good category (76%-100%), namely 100%.

Table 3. Frequency Distribution of Respondents' Knowledge Level in Control Group PreTest - PostTest

		Frequency	(%)
Pretest Level of knowledge	good (76%-100%)	9	37.5
	sufficient (56%-75%)	15	62.5
Post Test Level of knowledge	good (76%-100%)	8	33.3
	sufficient (56%-75%)	16	66.7

Table 3 shows that the majority of respondents with a total of 24 older adults in the control group level pretest knowledge is in the sufficient category (56%-75%), namely as much as 62.5%, while in the posttest control group, the majority level elderly knowledge is in the adequate category (56-75%), namely as much as 66.7%.

Table 4. Differences in Knowledge in the Intervention Group Before and After Health Promotion

Indicator	Group	n	P
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Level of knowledge of the elderly	Pretest	73	0.000
	Posttest	24	
	Total	97	

Table 4 shows the levels of knowledge in the intervention group before and after health promotion was carried out, which was processed using the Wilcoxon Test. The results stated mark NegativeRanks, which means there is no decrease ( reduction ) of the pretest value to the posttest value. The PositiveRanks result is 61 *b*, which means of the 73 respondents, there has been an increase in knowledge of 61 respondents of 31.00. The Ties result shows 12 *c*, which means that 12 respondents have pretest and posttest results with the same answers, or in other words, there is no increase or decrease in knowledge. Meanwhile, based on the output of the test statistics, Asymp.Sig. (2-tailed) is 0.000. Because the value of 0.000 is more minor than < 0.05, it can be concluded that the hypothesis is accepted.

## Discussion

### Characteristics Respondents

In line with research conducted by Damayanti, Hannan, and Fatoni (2019) showed that the distribution frequency characteristics at the level of education taken Of the 44 respondents, the data obtained showed that the highest level of education was elementary school education, with 33 respondents having a percentage of 75%.

The researchers concluded that in this study, the majority of older women were more than men because older women are more interested in participating in research compared to men; there are more older women than older men in the area, with the presentation of older women as much as 68%. For the education of older people, more of them have an elementary school education; this is because, according to interviews from several respondents at that time, high school was not yet necessary, and elementary school is sufficient, unlike now, where many schools were established. The encouragement for higher education was made easier. In contrast, at the time, they were still young, and all of that did not exist, so according to respondents who had elementary school education, it was enough to be able to read and write. In addition, the interviews conducted

during the study showed that most older people were in elementary school, and the researcher concluded that many older adults get married early, so they can't continue their education to the next level.

### **Level of Knowledge**

In line with research conducted by Khoirin & Juliasih (2020), it shows the distribution of frequency level knowledge before and after counseling in the form of education using leaflet media. The data obtained from the results of the knowledge scores before health promotion from 30 respondents showed that, on average, 19 respondents had good knowledge, which is 63.3%. While the score after health promotion, on average, 29 respondents had good knowledge, 96.7%. The results of the study concluded that there was a significant influence on the health promotion activities carried out.

Based on the researcher's assumption that knowledge results from "knowing," which occurs after a person senses something specific. Sensing through the five senses. Senses, namely sight, hearing, smell, taste, and touch ( Notoatmodjo, 2014). Good information can help sufferers of hypertension have a better life. One approach to control hypertension geriatrics is to improve awareness among the elderly, which can be done through health promotion. Health promotion is an effort to increase society's ability through learning that is beneficial for oneself and the surrounding environment. This learning is adapted to the local social culture and supported by policies of health-oriented public RI, KK (2017).

### **Difference Knowledge in the Intervention Group Before and After Health Promotion**

Line with research conducted by Lolita et al. (2017) showed that the increased knowledge to reduce the amount sufferer hypertension using counseling in the form of education with leaflet media door to door to the community from the data obtained the results of the knowledge score before health promotion the average value of the knowledge score was  $40.97 \pm 19.21$  and after health promotion  $90.65 \pm 13.65$  with a p-value = 0.000 at the level 95% confidence. The results of the study concluded that there was a significant influence on health promotion activities carried out.

In the intervention group data results, the majority level knowledge respondents have a

favorable ranking of 61 *bb* . The researcher assumes that the pretest and posttest were given on the same day after the education or counseling health promotion administration so that the value of the results obtained is still fresh or, in other words, older people are still capable of remembering the material well. Based on the data above, the researcher's assumption shows a difference in knowledge in the intervention group before and after health promotion through health education and leaflets on increasing understanding of the prevention of hypertension in the elderly.

### **The Influence of Differences Knowledge between Intervention Group and Control Group After Health Promotion**

In line with research conducted by Dilianty, Sianturi & Marlina (2019), Kendal's tau b statistical test with a level of 95% confidence level obtained p value = 0.011 (< 0.05), which means there is a significant relationship between level knowledge hypertension that is owned respondents with compliance of hypertension patients in seeking treatment at the Nagi Health Center, Nagi Regency Larantuka.

Nagi District Health Center Larantuka . The researcher assumed that the respondents in the control group get information about hypertension from the local health center. This is the source of information necessary for older people. However, at the time of the posttest, older people had limited information because they no longer got knowledge or information from sources. Therefore, the knowledge of the control group did not increase significantly. In the intervention group, the pretest and posttest were given the same day after the education, just as the previous explanation that the researcher expected. Delivered. So that the results obtained are fresh or, in other words, older people can still remember the material well.

This is also in line with Sarlinda's research (2018), which states that health education is an increase in knowledge and skills someone by studying technique practices or instructions with the intent to modify or influence the behavior of humans individually, in groups, and in society to be more independent in achieving the goal of a healthy life. So, when providing material, you must use methods or

media to attract the target's attention and help them understand.

Researchers assume that leaflets are the right media for conveying health information or messages through folded sheets that can contain ... sentences and pictures because leaflet media is easy for older people to understand.

## Conclusion

Based on the results of the research that has been carried out, it is concluded that the majority of Respondents are in the early elderly category (46-55 years) at 63.9%, of the type sex Woman at 68%, and the last education was elementary school graduate by 37.1%. The level of knowledge of the intervention group during the pretest was mostly in the good category of 76.7%, and during the posttest, it was in the good category of 100%. The control group's knowledge level during the pretest was in the sufficient category of 62.5%, and during the posttest, it was in the sufficient category of 66.7%. There was a difference in knowledge of the intervention group before and after health promotion with a value Asymp.Sig. (2-tailed) is  $0.000 < 0.05$ , and there is an influence difference in knowledge between the intervention and control groups after health promotion was carried out with a value of Asymp.Sig. (2- tailed) is  $0.000 < 0.05$ .

## Announcement

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