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## The Influence of Peer Group Education on The Quality of Life of Elderly with Hypertension



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### Abstract

Hypertension is a prevalent issue commonly encountered among the aged population, which can significantly impact their overall quality of life. Peer Group Education might be considered as a viable approach to enhancing the overall well-being and quality of life among the aged population. Peer group education refers to the systematic dissemination of education and knowledge to cohorts of individuals who perceive themselves to share commonalities in terms of age, mindset, hobbies, or other relevant attributes with their peers. The objective of this study was to examine the impact of Peer Group Education on the quality of life among elderly individuals diagnosed with hypertension. The research employed a purposive sampling technique, targeting a population of 42 individuals residing in Palebon Dukuksampeyan Village. The final sample size consisted of 38 participants. The independent factors were measured using a Standard Operating Procedure (SOP), whereas the dependent variable was assessed by a questionnaire on quality of life. Before peer group education, 36.8% of elderly individuals with hypertension reported a moderately bad quality of life; after peer group education, nearly 81.6% reported a reasonably excellent quality of life. These findings related to the impact of peer group education on the quality of life of elderly people with hypertension. The Wilcoxon ranks test was utilized to assess the impact of peer group education on the quality of life among senior individuals with hypertension. The resultant p-value was 0.008, with a significance level ( $\alpha$ ) of 0.05. The quality of life of older individuals residing in Palebon Village, Ponkesdes, is impacted by the presence of hypertension.

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## INTRODUCTION

Aging is inevitable. This makes the elderly vulnerable. The elderly are vulnerable because their immune system decreases. Changes in degenerative function increase chronic disease and disability (Miller, 2012). The capacity of the elderly to deal with external and internal pressure will decrease with age (Miller, 2012). The elderly are vulnerable, with 13.4% of the world's population in 2013 and 25.5% in 2050. In 2013, 8.9% of Indonesia's population is elderly; in 2050, it will be 21.4% (Ministry of Health of the Republic of Indonesia, 2014). According to the (Kementerian Kesehatan Republik Indonesia, 2018), 34.1% of Indonesians over 18 years of age suffer from hypertension, with the highest incidence in South Kalimantan (44.1%) and the lowest in Papua (22.2%). Indonesia has 427,218 deaths from hypertension and 63,309,620 cases of hypertension. Aged 31–44 (31.6%), 45–54 (45.3%), and 55–64 (55.2%) had hypertension. 8.8% were diagnosed with hypertension, while 13.3% did not take medication frequently. Most people with hypertension are not aware of it, so they do not seek therapy (Ardiani et al., 2019).

According to the 2013 Riskesdas, 35.6% of Indonesians aged 45–54 had hypertension, 45.9% of 55–64, 57.6% of 65–74, and 63.8% of 75 and older. Age increases hypertension prevalence, according to statistics. East Java has 26.2% hypertension. Elderly people often can't move or do heavy things. Physical changes that diminish produce numerous disruptions, compromising health and quality of life in the aged. Elderly women experience anger, loneliness, difficulties, stress, worry, and sadness. According to a quality of life study, Indonesians with fewer criteria are more likely to be old, women, low-educated, jobless, and rural. Non-communicable illnesses, mental-emotional problems, injuries, intermediate risk factors, and exposed dwellings lower quality of life. Age, gender, mental illness, living at home, and exposure all impact a patient's quality of life (World Health Organization, 2019). Researchers surveyed 40 senior posyandu participants and 38 hypertensive participants on June 28, 2022, in Palebon Village Ponkesdes. This disease's prevalence may lower senior quality of life. Nurses must manage social variables that impact hypertensive patients' quality of life as well as their health. If the elderly's quality of life doesn't improve, their health and physical abilities will decline, and they'll slowly withdraw from the community, decreasing their social interaction and quality of life (Yunita & Isnawati, 2018).

Physical, psychological, social, and environmental factors affect older quality of life. These modifications will affect senior quality of life. Dragomirecka & Selepova (Vahedi, 2010) found that old males had better quality of life than elderly women. Old guys. Elderly males expressed more happiness in personal connections, family support, economic situations, social services, living conditions, and health. Loneliness, poor economy, and future concern are higher in older women. Gender differences actually improve senior quality of life. Given their increased life expectancy and larger number, older women deserve better quality of life. Ageing and related issues are linked to the growing older population. Invite the elderly to think realistically and positively, provide social support, include them in social and philanthropic activities, and promote positive self-worth. According to (Rohmah et al., 2012), older people with excellent social contact have a good quality of life. Improving their quality of life may help them enjoy old age. Obesity, salt, lack of exercise, smoking, gender, stress, and alcohol intake increase hypertension risk. Peer group education helps elderly hypertensives learn. This peer group will help victims open up. Peer education will help responders grasp instructions so they may share experiences and information to better lives.

Based on the foregoing, researchers want to study "The Influence of Peer Group Education on the Quality of Life of Elderly with Hypertension at the Village Islamic Boarding School in Palebon Village".

## METHODS

In the month of December, the design or research design that will be carried out will be in Palebon Village Ponkesdes, and it will involve one group performing a pre-test post test design. At the Village Islamic Boarding School in Palebon Village, there were a total of forty old adults who were diagnosed with hypertension for the purpose of this research. (Notoatmodjo, 2018) The first measurement (pretest) was carried out on a sample picked from the community, then an intervention was carried out, and then a second measurement (posttest) was conducted out with the same group of subjects to examine the causes and consequences of the intervention or therapy (Notoatmodjo, 2018). As per Notoatmodjo's (2018) assertion, population refers to the complete set of subjects or objects that are under investigation. The study involved a cohort of 40 hypertensive individuals who were recruited from the Village Public Health Centre located in Palebon Village. The

present study employed a sampling technique known as "purposive sampling," which is a commonly utilized method in research sampling (Sugiyono, 2016). This study employs purposive sampling, a method for selecting a sample that is based on specific criteria determined by the researcher. This approach

ensures that the selected sample possesses the desired characteristics and can effectively represent the population under investigation. Variables are forms or identities that are owned by one of the group members as opposed to those of other groups (Notoatmodjo, 2018).

Table 1 Operational Definition

Research variable	Operational definition	Parameter	Measuring instrument	Scale	Score
Peer Group	Peer groups are peers. Peer groups are people who become resource persons for their peer groups.	1. Submission of material on the symptoms and causes of hypertension 2. Physical exercise 3. Submission of diet materials	SOP	-	-
Quality of Life	Quality of life is a condition of physical health such as activities of daily living, dependence on medical assistance, need for rest, anxiety, mobility, psychological health, physical appearance and image.	1. Physical Domains 2. The psychological domain 3. Social domains 4. Environmental domains	Measurement using WHOQOL-BREF	Ordinal	a. Good quality of life (324-400) b. Fairly good quality of life (244-320) c. Moderately poor quality of life (164-240) d. Poor quality of life (80-160)

## Data Analysis Method

### a. Bivariate

Bivariate analysis is a test of variables that are suspected to be related or correlated (Notoatmodjo, 2018). Using statistical tests, this study uses bivariate analysis to determine whether there is a relationship between the dependent data and independent variables. Because the research data is on an ordinal scale, the statistical test uses the Wilcoxon test with a 95% degree of confidence and  $\alpha = 0.05$ .

The decision on the results of the statistical test by comparing the p-value (p-value) and the value of  $\alpha$  (0.05), the provisions that apply are as follows.

1. If the p-value  $< 0.05$  means that  $H_0$  is rejected, there is a peer group influence on elderly hypertension in Palebon Village.
2. If the p-value  $> 0.05$  means that  $H_0$  is accepted, it means that there is no peer group effect on elderly hypertension in Palebon Village

### b. Multivariate

Multivariate analysis was carried out with the aim of looking at the relationship of several (more than one) independent variables with one or several dependent variables (generally one dependent variable). In multivariate analysis, it will be known which independent variables have the greatest influence on the dependent variable (Arikunto, 2011). Multivariate analysis in this study is logistic regression.

**Ethical Clearance**

This research has passed the ethical test with a letter-number 188/KET/II.3.UMG/KEP/A/2022.

**RESULTS**

Table 2 Frequency Distribution of Characteristics Based on Older Age at the PONKESDES in Palebon Village

No	Age	f	%
1.	60-65 Years	23	60.5
2.	66-70 Years	15	39.5
Total		38	100

Table 2 shows that of the 38 elderly who suffer from hypertension, the majority are aged 60-65 years, as many as 23 elderly with a percentage of 60.5%.

Table 3 Characteristic Frequency Distribution Based on Marital Status in the Elderly at PONKESDES Palebon Village

Previous Work	f	%
government employees	0	0.0
Labor/Employee	0	0.0
Farmer	12	31.6
Doesn't work	26	68.4
Total	38	100

Table 3 shows that of the 38 older people with hypertension, almost half (31.6%) worked as farmers, 12 older people, most (68%) did not work 26 people.

Table 4 Quality of Life for Elderly with Hypertension Before Conducting Peer Group Education at PONKESDES Palebon Village

Quality of Life Pre-Test	f	%
Quality of Life Fairly Good	24	63.2
Good Quality of Life	0	0.0
Relatively Poor Quality of Life	14	36.8
Poor Quality of Life	0	0.0
Total	38	100

The table above shows that before peer group education, the quality of life was exceptionally good for the majority (63.2%) of 24 people with hypertension, and almost half (36.8%) had poor quality of life for 14 people with hypertension.

Table 5 Quality of Life Post Test

Quality of Life Post Test	f	%
Quality of Life Fairly Good	31	81.6
Good Quality of Life	0	0.0
Relatively Poor Quality of Life	7	18.4
Poor Quality of Life	0	0.0
Total	38	100

The table above shows that as much as peer group education was carried out, the quality of life was quite good, almost entirely (81.6%) increased by 31 people, and those whose quality was quite bad decreased by a small portion (18.4%) to 7 people.

## DISCUSSION

The elderly need to get attention because the elderly are at high risk of experiencing various health problems, primarily degenerative diseases. One of the leading health problems in the elderly is high blood pressure (hypertension). Hypertension is a problem in old age because it is the leading cause of stroke, heart failure, and coronary heart disease. These health problems can cause a decrease in the quality of life of the elderly. The quality of life of the elderly is the level of well-being and satisfaction with the conditions experienced by the elderly, which are affected by disease or treatment. The quality of life of the elderly is obtained from the welfare of the elderly emotional, physical, work, cognitive, and social life (Khomarun et al., 2014). According to the Indonesian Ministry of Health (2013), there are more older women than older men. This is because women's life expectancy is the highest. Likewise, according to WHO (2009), life expectancy in women is more prolonged than in men. The results of this study align with the opinion of Moons, Marquet, Budst, and de Geest (2004 in Nofitri 2009), saying that gender is an essential factor and influences the quality of life of older people.

Occupational factors can also affect the quality of life in the elderly with hypertension. The results showed that older people did not work or were housewives, with a high percentage of 68.4%. This was because most of them lacked activity so that the body could not burn fat in the body, which could cause blood flow not to run smoothly, which would increase the burden on the heart and thus increase blood pressure. Regarding other jobs, as many as 31.6% work as farmers. In this case, most of them work without knowing the time, so they need more rest. In addition, farmers have psychological and social problems that are not good and have an essential role in everyday life. Meanwhile, from a social perspective, working as a farmer is rare to be able to participate in Posyandu activities, so there is a lack of interaction with fellow elderly, especially in terms of obtaining information. Older people not only experience physical setbacks but also experience psychological setbacks such as emotional and memory decline. Changes in the emotions of more senior people make them feel useless and not needed by others, so it will create a desire to be recognized by others because older people find it challenging to show their feelings openly. Peer group education is a suitable medium for older people to feel

acknowledged and valued by others and for older people to express their feelings openly.

The results showed that the quality of life of older people has changed. Before being given education through peer group education, the majority of the quality of life of older people with hypertension decreased. After being given education through peer group education, the quality of life is quite good, and the quality of life for most older people with hypertension has increased. The Wilcoxon Signed Rank Test was conducted to assess the impact of peer group education on the quality of life among elderly individuals with hypertension. The obtained p-value was .008, with a significance level ( $\alpha$ ) of 0.05. As the p-value was less than the significance level, it was concluded that the alternative hypothesis (H1) was accepted, indicating that peer group education has a significant influence on the quality of life of elderly individuals with hypertension at the Ponkesdes in Palebon Village.

Improved quality of life occurs due to the support of peers and the environment. In discussing hypertension and its diet that can be followed by the elderly when their blood pressure increases, they take steps to participate in peer group education. The elderly who received the peer group education intervention had a better understanding of hypertension and added information about how to deal with their illness so that the elderly could improve their physical health. In addition, the elderly get support from peers, which can enhance the welfare of the elderly. Peer group education activities are beneficial and effective in improving the quality of life of older adults. By expressing their opinions and discussing them, they feel more valued. In addition, the information obtained by more senior people also increases. This is really needed by the elderly to improve their health. According to researchers, the existence of an elderly posyandu in the village is a suitable media or means to enhance peer group education for older people. So that they can find and overcome problems that occur in their lives to improve their quality of life.

## CONCLUSION

Based on the findings of a study titled "The Impact of Peer Group Education on the Quality of Life of Elderly Individuals with Hypertension in Palebon Village Ponkesdes," it can be inferred that the quality of life among elderly residents of Palebon Village Ponkesdes was relatively favourable prior to

the implementation of peer group education interventions. Specifically, 24 individuals, accounting for 62.2% of the sample, reported a satisfactory quality of life. The present study examines the impact of a peer group education intervention on the quality of life among older individuals residing in the Ponkesdes of Palebon Village. Findings indicate that following the intervention, a significant majority of participants, comprising 81.6% (n=31), reported a relatively good quality of life. Conversely, a smaller proportion of individuals, accounting for 18.8% (n=7), reported a relatively poor quality of life. The quality of life of older individuals with hypertension at the PONKESDES of Palebon Village is influenced by peer group education, as evidenced by a statistically significant p-value of 0.008 ( $p < 0.05$ ).

### SUGGESTION

According to the findings of the study, peer group education has the potential to enhance understanding and comprehension of knowledge acquired through lectures. Additionally, the research outcomes shed light on the impact of peer group education on the quality of life among hypertensive senior individuals. The research findings can serve as a valuable point of reference for future investigations, such as exploring additional variables that influence the quality of life among elderly individuals diagnosed with hypertension. There is an expectation that individuals in the elderly population who have hypertension will consistently adhere to a health-conscious lifestyle. This entails engaging in physical activities, such as morning walks and gymnastics, fostering a positive mindset, and mitigating stress through activities like gardening and household chores. The objective is to prevent the onset of hypertension and promote overall well-being.

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### CONFLICTS OF INTEREST

The researchers were very grateful in this study because they did not find difficulties.

### AUTHOR CONTRIBUTIONS

All authors fully contribute to research activities starting from drafting activities, tabulating data management, writing draft of manuscripts and analysis. Each author makes a positive contribution to this activity from start to finish, including publishing articles in this journal.

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