



Original Research

Correlation Between Visiting Posyandu and Hypertension Prevention Among the Elderly at Simpang Tiga Public Health Center, Pekanbaru City

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Abstract

Hypertension is a common condition among the elderly that can lead to serious health complications if left untreated. The prevalence of hypertension in Pekanbaru City tends to increase with age, and it is more common among the elderly. Approximately 8.1% of people in Simpang Tiga Public Health Center (PHC) live with hypertension. The purpose of this study was to determine the relationship between elderly visits to posyandu and the prevention of hypertension in the elderly. This research method used a quantitative approach with a cross-sectional design. We conducted this research at the Simpang Tiga PHC in Pekanbaru City from January to July 2023, using a questionnaire to assess visits to the elderly and prevent hypertension. This study used purposive sampling technique. The sample for this research was 74 elderly. The analysis used was the frequency distribution and the chi-square test. There was a relationship between elderly visits to posyandu and the prevention of hypertension ($p < 0.001$, $OR = 3.06$, $95\% CI = 1.756-5.336$). We recommend conducting a longitudinal or intervention study to provide deeper insights and assist in the development of more effective strategies for the prevention of hypertension in the elderly.

Keywords: Elderly, Visits, Posyandu, Prevention, Hypertension

INTRODUCTION

Hypertension is a common disease among the elderly people. It's a significant public health concern worldwide, often termed to as the "silent killer" due to its asymptomatic nature in many cases. This stealthy characteristic underscores the importance of regular blood pressure monitoring, especially in elderly (WHO, 2023). It was estimated that hypertension will affect 1.56 billion people worldwide by 2025, with a 60% increase in global prevalence (Stanaway et al., 2018). The prevalence of hypertension has increased, especially in low-and middle-income countries (LMICs), with low of levels of knowledge, treatment, and blood pressure control (Mills et al., 2020). Approximately 78% of adults with hypertension reside in LMICs. The highest number of individuals with hypertension reside in the most densely populated The World Health Organization (WHO) regions: Western Pacific Region and South-East Asia Region. The global prevalence of hypertension was 26.4% or 972 million persons in 2018, and it grew to 29.2% in 2021. The WHO estimates that 9.4 million people

die annually as a result of hypertension problems. Out of a total of 972 million people with hypertension, 333 million instances were identified in industrialized countries and 639 million cases were detected in developing countries, including Indonesia (WHO, 2023).

Based on the basic health research report that the prevalence of hypertension in Indonesia has increased from 25.8% in 2013 to 34.1% in 2018 (MoH of Republic Indonesia, 2018). In the order hand, elderly hypertension in Indonesia is a significant health concern too, with various studies highlighting its prevalence, risk factors, and the efforts to manage and mitigate its impact. The prevalence of prehypertension among Indonesian adults aged over 40 years is notably high at 32.5%, with age ≥ 60 years, male sex, overweight, obesity, and raised waist circumference identified as significant risk factors (Lydia et al., 2021).

Various factors contribute to the high occurrence of hypertension in the elderly. As individuals age, blood vessels experience a decrease in elasticity and become more rigid, perhaps resulting in elevated blood pressure. Furthermore, age-related alterations like reduced renal function and hormonal changes could also be contributing factors. Poor diet, sedentary behaviour, excessive alcohol intake, and smoking worsen the risk due to lifestyle variables (WHO, 2023).

A study in Riau Province reported that hypertension is the third most prevalent disease with 198,543 cases (17.8%), and the city of Pekanbaru has a hypertension rate of 8.30%. The highest prevalence was found in Simpang Tiga Health Center, at about 8.1%, compared to other health centers such as Rejosari (4.2%) and Limpah Puluh (5.5%) (Syafitri et al., 2022). In addition, a study conducted in Pekanbaru City found that the most influential variables concerning uncontrolled blood pressure among elderly hypertensive patients were smoking habit, no routine for taking antihypertensive drugs, and sodium intake (Mitra & Wulandari, 2019). Access to healthcare can also be a barrier for elderly people with hypertension in Indonesia, particularly for those living in rural areas or with limited financial resources (Rahmawati & Bajorek, 2015).

Posyandu lansia, which stands for “Pos Pelayanan Terpadu”, is a community-based program in Indonesia that aims to provide health services to the elderly community. The program involves regular health screenings, monitoring of drug use, and health education tailored to the specific needs of elderly individuals. Studies have shown that posyandu lansia, play an important role in addressing various health problems among the elderly community (Santi et al., 2023)(Syafitri et al., 2022)(Triwibowo et al., 2023). These services can improve the health status, cognitive function, and overall quality of life of elderly (Tuwu & La Tarifu, 2023a).

Visiting elderly posyandu for hypertension prevention is a critical step in managing and reducing the prevalence of hypertension among the elderly population. Hypertension significantly affects the elderly due to physiological changes and decreased body function associated with aging (Harnawati & Nisa, 2023). The prevalence of hypertension increases with age, making it imperative for the elderly to engage in preventive measures (Muwarni & Anggoro, 2023). Elderly posyandu play a vital role in providing health education and preventive services. Health education, particularly about hypertension and its prevention, has been shown to enhance the knowledge of the elderly, enabling them to manage and prevent the disease more effectively (Ariesti et al., 2022)(Noviani & Rahmi Windhy Astari, 2023). These educational interventions can include information on adopting healthy lifestyles, such as reducing salt intake and increasing the consumption of foods low in fat and high in fiber (Doortua & Laia, 2023).

Visits to posyandu by the elderly have had a notable effect on their health and overall well-being. Research has emphasized the significance of elderly posyandu programs in

delivering health care, social activities, and educational interventions for the elderly (Arini & Primastuti, 2023; Santi et al., 2023; Tuwu & La Tarifu, 2023b). However, the establishment and continuous operation of elderly posyandu face challenges, including the need for trained health cadres and overcoming barriers to access for some elderly individuals. Thus, to know between correlation between elderly visits to posyandu and the prevention of hypertension is needed.

METHODS

This type of research is quantitative, with a cross-sectional design. The Simpang Tiga PHC in Pekanbaru City conducted the research from January to July 2023, utilizing a total sample of 74 elderly. Patients aged ≥ 60 years and taking hypertension medication were the sample criteria. In this study, purposive sampling was the sampling technique. We utilized a structured questionnaire as an instrument. To determine the frequency distribution, we performed univariate data analysis and bivariate data analysis using the chi square test.

RESULTS

Table 1. Distribution of Respondent Characteristics (N = 74)

Variable	Frequency	Percentage (%)
Age		
Middle Age (≥ 45 -59 years)	57	77.0
Elderly (≥ 60 -75 Years)	17	23.0
Sex		
Male	36	48.6
Female	38	51.4
Education		
No school	11	14.9
Low	45	60.8
Intermediate	18	24.3
Work		
Have a job	31	41.9
Don't have a job	43	58.1
Marital status		
Marry	55	74.3
Widow / widower	19	25.7

Data source: Primer data

Based on Table 1, it shows that of the 74 respondents, the majority (77%) are in the middle age range, namely 57 people. More than half of the elderly (51.4%) were female, namely 38 people; more than half of the elderly (60.8%) had a low level of education (SD-SMP), namely 45 people; and 43 people (58.1%), or more than half of the respondents, worked.

Table 2. Distribution of respondents based on elderly visits and prevention of hypertension at the Simpang Tiga PHC, Pekanbaru City

Variable	Frequency	Percentage (%)
Posyandu Elderly Visits		
Regular	52	70.3
Not regular	22	29.7
Prevention of Hypertension		
Yes	36	48.6
No	38	51.4

Based on Table 2, it shows that almost all elderly people (70.3%) visit the posyandu every month, namely 52 people. More than half of the elderly who do not take precautions have hypertension, namely 38 respondents (51.4%).

Table 3. Distribution of the relationship between posyandu elderly visits and hypertension prevention among the elderly at the Simpang Tiga PHC, Pekanbaru City

Posyandu Elderly Visits	Prevention of Hypertension				Total	95%CI	P value
	Yes	%	No	%			
Regular	29	74.4	10	25.6	39	3.06 (1.756-5.336)	0,000
Not Regular	7	19.4	28	73.7	35		
Total	36	48.6	38	98.7	74		

From Table 3, it can be seen that there is a relationship between elderly visits to the posyandu and preventing hypertension, where $p < 0.05$ ($p = 0.000$) and the OR value is 11.6, meaning that elderly people who visit the posyandu every month have 11.6 times the chance of preventing hypertension. compared to elderly people who do not visit every month.

DISCUSSIONS

In terms of age, majority elderly (77%) are in the middle-aged (55-64years). This research is in line with research conducted by (Sintia et al., 2022) 57.5% which found that there were more pre-elderly and middle-aged age groups that came to posbindu compared to the elderly age group. However, it is different from other findings in Mojosari District that most of the elderly (85.3%) are aged 60-74 years who came to posyandu (Frilasari et al., 2022). Based on gender characteristics, more than half of the elderly (51.4%) are female, namely 38 people. In line with study in Mojosari distric that was found that most of the elderly were female, namely as many as 24 people (70,6 %) who visited elderly posyandu (Frilasari et al., 2022). According to the results of the research, it is clear that women are more active in making visits than men. The educational characteristics of the respondents were that more than half of the elderly (60.8%) had a low level of education (Elementary-Junior high school), namely 45 people.

According to Table 2, the majority of the elderly (70.3%), or 52 persons, visit the posyandu every month. There are many elements affecting the utilization of elderly posyandu, including education, occupation, knowledge, attitudes, and family support (Siregar et al., 2024). Other findings, attitude, trust, access, cadres role, health care workers role, facility, and disease susceptibility perception have a correlation to elderly posyandu utilization (Prihatiningsih et al., 2020). One of the challenges for the elderly in getting to the posyandu is the lack of family aid in delivering or reminding them to come. Family support is one sort of family therapy in which health issues can emerge and be treated concurrently (Friandi, 2022). This is consistent with the theory Friedman which states that the family can function as the main support for its members so that members view that people who are supportive are always ready to provide help and assistance if needed.

The research results showed that there was a relationship between elderly visits to posyandu and hypertension prevention where $p < 0.05$ ($p = 0.000$) and an OR value of 11.6 were obtained, meaning that elderly people who visited posyandu every month had 11.6 times the chance of preventing hypertension compared to the elderly who do not visit every month.

Lifestyle factors like smoking, physical activity, stress, coffee use, and salt consumption all contribute to an increase in hypertension (Prihatiningsih et al., 2020). Regular visits to posyandu help the elderly prevent hypertension by providing early identification, health education, regular monitoring, access to health services, and social support. Continuous attempts to enhance older involvement in posyandu programs can have a substantial impact on hypertension control and quality of life (Tinambunan & Wibowo, 2019). Several factors influence the success of Posyandu for the elderly, including family support, which has been identified as an important component in encouraging regular visits (Tinambunan & Wibowo, 2019)(Eswanti & Sunarno, 2022)(Friandi, 2022). In addition, the quality of services provided at Posyandu, including medical and non-medical aspects, plays an important role in attracting elderly patients to revisit (Tinambunan & Wibowo, 2019). Motivation among the elderly also significantly influenced their visitation levels, with higher motivation correlated with more active participation (Sairozi & Hariyanto, 2020).

CONCLUSIONS

Regular visits to posyandu provide significant benefits in the prevention and management of hypertension in the elderly. The posyandu program must continue to be supported and improved to ensure that more elderly people can benefit from this service. A longitudinal or intervention study to provide deeper insights and assist in the development of more effective strategies for the prevention of hypertension in the elderly is recommended.

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