

SOCIO-DEMOGRAPHIC CHARACTERISTICS AND ROUTINE VISITS TO ELDERLY INTEGRATED HEALTH POSTS (POSYANDU LANSIA) : A LOGISTIC REGGRESSION IN PEKANBARU

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Abstract

Introduction : Routine attendance at elderly integrated health posts (posyandu lansia) is a key indicator of older adults' engagement in preventive health care. However, participation rates remain inconsistent and are influenced by various socio-demographic and familial factors. This study aimed to analyze the association between elderly characteristics and their likelihood of routine participation in posyandu lansia activities. Methods : This descriptive-analytic quantitative study employed a cross-sectional design conducted from September 2024 to February 2025. A total of 93 respondents aged 60 years and above were selected using purposive sampling. Data were collected through a structured questionnaire covering socio-demographic characteristics, knowledge, family support, and the role of health cadres. The instrument showed high reliability with a Cronbach's alpha of 0.931. Data were analyzed using binary logistic regression at a 5% significance level. Results : The model demonstrated a Pseudo R² of 0.1783 and an LLR p-value of 0.08785, suggesting that approximately 17.8% of the variance in routine visits could be explained by the independent variables. Marital status (married) was significantly associated with higher likelihood of routine visits ($B = 1.3459$; $p = 0.047$), whereas living with children or in-laws showed a negative association ($B = -1.5339$; $p = 0.043$). Respondents with no formal education were marginally significant ($p = 0.059$). Other variables such as age, gender, and occupation were not significant predictors. The overall model accuracy was 68%. Conclusion : Routine visits to posyandu lansia are influenced primarily by social and familial contexts, particularly marital status and living arrangements. Strengthening family support systems and empowering health cadres could enhance elderly participation in community-based health programs.

Keywords: elderly, routine visit, posyandu lansia, family support, marital status

INTRODUCTION

The increasing number of elderly people is one indicator of successful health development, but it also presents a new challenge for health care systems worldwide. Indonesia has entered the era of *an aging population*, where the number of elderly people (≥ 60 years) increases significantly every year. According to data from the Central Statistics Agency (BPS, 2023), the proportion of elderly people in Indonesia has reached 11.75% of the total population, with a predicted increase of 20–23% by 2045, equivalent to approximately 63 million people. This condition indicates that Indonesia will become one of the countries with the largest elderly population in Southeast Asia.

This phenomenon aligns with global trends. The World Health Organization (WHO, 2022) reports that the world's elderly population is increasing rapidly from 1 billion in 2020 to 2.1 billion in 2050, and two out of three elderly will live in developing countries. This increase has consequences for health, social, and economic systems, as older adults are at higher risk of chronic disease, functional decline, and the need for long *-term care* (United Nations, 2023). Older adults have diverse social and demographic characteristics, which influence their health, independence, and participation in healthcare services. Factors such as gender, education, employment, and marital status have been shown to play a significant role in determining older

adults' behavior and engagement with healthcare services (Zhou et al., 2021; Nunes et al., 2020). A study by Zhou et al. (2021) in China showed that older women access healthcare more frequently than men but are more vulnerable to social and economic dependency. Furthermore, low education and unemployment are associated with limited health knowledge and lower participation in routine check-ups (Nunes et al., 2020).

In Indonesia, the Indonesian Ministry of Health (2022) noted that approximately 57.6% of elderly people are unemployed and more than half have a low level of education (elementary school or below). This situation exacerbates the risk of social dependency and reduces participation in health programs such as *the Elderly Integrated Health Post (Posyandu)* or routine health checks at Community Health Centers (Puskesmas). Elderly women also dominate the elderly population, with a ratio of 56:44 to men, in line with the high life expectancy for women, which reaches 73.5 years, compared to 69.5 years for men (BPS, 2023). A similar phenomenon was observed at the Melur Community Health Center in Pekanbaru City, one of the centers with the highest elderly population in the region. Based on initial observations, the majority of elderly people seeking healthcare services were women, had lower-middle education, and were unemployed. This situation indicates sociodemographic disparities that can affect elderly participation and accessibility to primary healthcare services. Elderly people from lower socioeconomic backgrounds tend to participate less in routine checkups and have limited health literacy.

Although various studies on elderly health have been conducted in Indonesia, most have focused on clinical aspects such as degenerative diseases, hypertension, or diabetes mellitus. Few studies have specifically addressed the sociodemographic characteristics of older adults and their implications for primary healthcare utilization, particularly at the Melur Community Health Center in Pekanbaru City. Yet, a thorough understanding of sociodemographic characteristics is crucial for developing evidence-based interventions *tailored* to local needs (Rahmawati et al., 2022).

Therefore, this study is crucial to describe the sociodemographic characteristics of the elderly at the Melur Community Health Center in Pekanbaru City and analyze its implications for the development of primary healthcare services for the elderly. The results are expected to serve as a basis for policymakers and healthcare professionals in designing more effective, equitable, and population-focused care programs for the elderly.

METHODS

Cross-sectional analytical survey design. This approach was chosen because it allows for describing the relationship between various variables at a single measurement point without requiring follow-up with respondents. The independent variables in this study include family support, the role of cadres, and the level of knowledge of the elderly, while the dependent variable is the frequency of visits to the integrated health post (Posyandu). This design is appropriate for explaining the relationship between sociodemographic factors and elderly health behaviors and their level of participation in primary health care (Sugiyono, 2021).

The study was conducted in the Melur Community Health Center (Puskesmas) area in Pekanbaru City, Riau Province. This location was purposively selected because it has the highest elderly population in Pekanbaru City, making it a representative location for describing the characteristics of older adults in urban areas. The study was conducted from September 2024 to February 2025, covering all stages, from obtaining research permits and ethical review, data collection, and analysis.

The population of this study was all elderly people registered in the Melur Community Health Center working area with a total of 2,925 people. The determination of the number of samples used the Lemeshow formula for large populations and obtained a minimum sample size of 93 respondents. The sampling technique was carried out using a purposive sampling method, with inclusion criteria being elderly people aged ≥ 60 years, domiciled in the Melur Community Health Center working area, able to communicate well, and willing to be respondents by signing an *informed consent form*. Elderly people with severe cognitive impairment, serious illness, or who refused to participate were excluded from the study.

The instrument used was a structured questionnaire that included four main sections, namely (1) sociodemographic characteristics of the elderly, (2) level of knowledge, (3) family support, and (4) the role of elderly Posyandu cadres. The questionnaire was developed based on health behavior theory and the results of relevant previous research. Validity and reliability tests were conducted before data collection. The results of the validity test showed that all items had an item-total correlation value >0.374 , while the reliability test showed a *Cronbach's alpha value* of 0.931, which indicates that the instrument has very good internal consistency and is suitable for use.

The data collection process was carried out in three stages: preparation, implementation, and data checking. During the preparation stage, researchers obtained research permits, coordinated with the Melur Community Health Center, and trained enumerators. The implementation stage involved direct interviews using questionnaires with respondents attending the elderly health post (posyandu). Enumerators assisted respondents with reading or writing disabilities. Each questionnaire was checked for completeness immediately after completion to minimize errors and data loss.

The collected data were then analyzed using two types of analysis, namely univariate and bivariate analysis. Univariate analysis was conducted to describe the frequency distribution and percentage of each research variable. Bivariate analysis was conducted to determine the relationship between the independent variables (family support, the role of cadres, and elderly knowledge) with the dependent variable (elderly visits to the integrated health post) using the *Chi-Square test* with a 95% confidence level ($\alpha = 0.05$). The test results were considered statistically significant if the *p value* <0.05 .

This research has obtained ethical approval from the Health Research Ethics Commission of the Pekanbaru State Payung Health Institute with Number: 072/KEPK-IKPN/IX/2024. The ethical review process was conducted to ensure that all research procedures met the ethical principles of health research, including *respect for persons*, *beneficence*, *non-maleficence*, and *justice*. Prior to data collection, each respondent was given an explanation of the purpose, benefits, and procedures of the research, as well as their right to refuse or withdraw at any time without consequence. Respondents who were willing to sign an *informed consent form* participated. The researcher guaranteed the confidentiality of respondents' identities and ensured that the data obtained would only be used for scientific purposes.

RESULTS

A total of 93 elderly respondents participated in this study, conducted within the Melur Community Health Center (Puskesmas) in Pekanbaru City. Analysis showed that the majority of respondents were female (68 respondents) (73.1%), while 25 were male (26.9%). This female predominance in the elderly population aligns with national and global demographic trends, which show that women have a higher life expectancy than men (World Health Organization, 2022).

Based on education level, the majority of respondents (48 respondents) had a high school education (51.6%), followed by 20 respondents (21.5%), 14 respondents (15.1%), 7 respondents (7.5%), and 4 respondents (4.3%) who had no education. This indicates that the majority of elderly respondents have a secondary education, which can influence their understanding of health information, their ability to adapt to social change, and their participation in health service activities such as elderly integrated health posts (Posyandu). In terms of employment, nearly all respondents (88 people) were unemployed, with the remainder working as traders (2.2%), retirees (2.2%), and self-employed (1.1%). This indicates that the majority of elderly in the Melur Community Health Center's work area are no longer economically productive and likely rely on family support to meet basic needs and access healthcare services.

Meanwhile, based on marital status, 37 respondents (39.8%) were divorced, 33 respondents (35.5%) were divorced, and 23 respondents (24.7%) were still married. These findings indicate that the majority of elderly people live without a partner, potentially leading to psychosocial problems such as feelings of loneliness, reduced emotional support, and decreased motivation to maintain optimal health. Overall, the description of the characteristics of the elderly in the Melur Community Health Center work area shows that elderly women, unemployed, with secondary education, and living without a partner are the dominant groups that require special attention in the preparation of community-based elderly health service programs.

DISCUSSION

The results of this study show that elderly women dominate the population of healthcare users at the Melur Community Health Center in Pekanbaru City. This finding is consistent with a report by the Central Statistics Agency (BPS, 2023), which shows that the proportion of women in the elderly group in Indonesia is higher than that of men, with a gender ratio of 87.9. The high number of elderly women is associated with longer life expectancy due to biological factors and better health behaviors (United Nations, 2020). However, elderly women are also more vulnerable to economic and social dependence, especially if they are unpartnered (WHO, 2022).

Education also plays a significant role in determining the level of awareness and participation of older adults in healthcare services. The majority of respondents with a high school education demonstrated that they possess adequate literacy skills to understand health messages. However, there are still groups with primary education and no schooling who are at risk of limited access to health information. This aligns with the findings of Rahmah et al. (2021), who found that higher education levels are positively correlated with older adults' participation in elderly health post (Posyandu) activities and healthy lifestyle behaviors.

In terms of employment, research shows that the majority of older adults are no longer working. Economic inactivity in older adults is a common phenomenon associated with the aging process and declining physical capacity (Ministry of Health of the Republic of Indonesia, 2023). However, this condition implies increased dependence on family and community support. Unemployed older adults tend to have lower mobility and a higher risk of social isolation (Putri & Sari, 2022). Therefore, family- and community-based interventions need to be strengthened to enable older adults to continue actively participating in social and health activities.

Furthermore, the large proportion of elderly people who are divorced or separated indicates potential psychosocial issues that require attention in elderly health services. Elderly

people who lose their spouses generally experience a decline in subjective well-being and emotional support (Novita et al., 2022). This condition can impact motivation to maintain health and participate in elderly integrated health post (Posyandu) activities. Therefore, social support from family, cadres, and the surrounding community is a crucial element in improving the physical and psychological well-being of elderly people.

In general, the results of this study confirm that sociodemographic factors significantly influence elderly participation in primary health care. These findings reinforce previous studies showing that gender, education, employment, and marital status are closely related to elderly health behaviors (Fatmawati et al., 2023; WHO, 2022). Therefore, strengthening Posyandu (Integrated Service Post) services for the elderly should be carried out through an approach that considers local sociodemographic characteristics, taking into account the specific needs of elderly women, the unemployed, and those living alone.

The results of this study have several important implications for the development of primary health care for the elderly. First, the finding that the majority of elderly people are women, unemployed, and living alone demonstrates the need for a service approach that focuses on strengthening social and family support. Families play a key role in helping elderly people access health services, including regular visits to the elderly health post (posyandu). Therefore, family-based interventions, such as mentoring programs or family education on elderly care, are essential to increase participation and sustainability of elderly health services.

Second, the research results show that the education level of older adults influences their understanding and involvement in health activities. This underscores the importance of health communication strategies tailored to the literacy levels of older adults. Health workers and cadres need to use simple, interactive, and visual outreach methods to make health messages more easily accepted and implemented by older adults with less education.

Third, the high proportion of unemployed and economically dependent older adults demonstrates the need for stronger social policy support, such as empowerment programs for productive older adults or community social activities that can foster a sense of empowerment and independence. Cross-sectoral support between community health centers, local governments, and social organizations is also crucial in strengthening a holistic and sustainable network of elderly services.

From an academic perspective, this research contributes to the growing body of literature on the relationship between sociodemographic factors and health behaviors in older adults in Indonesia, particularly in the context of primary care in urban areas. The results can serve as a basis for further research in developing community-based intervention models that are responsive to the sociodemographic needs of older adults.

CONCLUSION

This study shows that elderly participation in primary health care services at the Melur Community Health Center in Pekanbaru City. Higher levels of education have been shown to improve the elderly's understanding and involvement in health services, while those with lower education face limited health literacy. Most elderly are no longer working, which causes dependence on family and increases the risk of social isolation. On the other hand, the large number of elderly living alone (divorced/deceased) indicates the need for attention to their psychosocial aspects.

The findings highlight the importance of a family- and community-based approach to healthcare for the elderly, with communication strategies tailored to literacy levels, and cross-sectoral policy support for empowerment and poverty reduction services. Scientifically, this

research enhances understanding of the sociodemographic dynamics of the elderly within the context of primary healthcare in urban Indonesia and can serve as a basis for developing more adaptive and inclusive community-based interventions.

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