

## Family Support Serves as Key Determinants Influencing the Utilization of the Integrated Health Service Post for the Elderly

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### ABSTRACT

Utilization of the *Posyandu Lansia* remains suboptimal in the Belimbing Health Center despite its essential role in preventive health services for older adults. Various demographic and behavioral factors have been examined, yet the determinants influencing service utilization remain inconsistent across studies. This study aimed to identify the factors associated with the utilization of the *Posyandu Lansia*, with a particular focus on the role of family support as a potential determinant. A quantitative analytic study with a cross-sectional design was conducted among older adults registered in the Belimbing Health Center. Data were collected using a validated questionnaire measuring demographic characteristics, knowledge, attitudes, family support, health-worker support, and accessibility. Statistical analysis included descriptive and bivariate testing using the Chi-square method. The findings revealed that family support was the only factor significantly associated with the utilization of the *Posyandu Lansia*. Emotional encouragement was generally adequate, yet gaps were evident in instrumental support such as transportation and physical accompaniment, as well as informational support such as schedule reminders. Other variables including age, sex, education, occupation, knowledge, attitude, distance, and health-worker support showed no significant association with service utilization. In conclusion, family support serves as the primary determinant of *Posyandu Lansia* utilization. Strengthening instrumental and informational support within the household is essential to improving attendance and ensuring consistent engagement in preventive health services among older adults.

**Keywords:** *Posyandu Lansia*; service utilization; family support

### INTRODUCTION

As life expectancy continues to rise, Indonesia is entering a demographic transition characterized by a rapidly growing older population. Ageing is a natural and inevitable biological process in which individuals experience gradual physical, mental, and social decline beginning at 60 years of age and above [1]. As a vulnerable population group, older adults are entitled to high-quality health services that ensure healthy and productive ageing, as mandated by the Indonesian Health Law No. 17 of 2023. Such services are essential because the progressive decline in functional capacity increases susceptibility to chronic and degenerative diseases.

To address these challenges, the Indonesian government has established the *Posyandu Lansia* (Elderly Integrated Health Service Post) as a community-based frontline health initiative under the Community-Based Health Efforts (*Upaya Kesehatan Bersumberdaya Masyarakat*, UKBM), and the *Posyandu Lansia* also functions as a strategic platform for promoting healthy ageing and facilitating early detection of chronic conditions among older adults. Although the number of *Posyandu Lansia* has increased significantly from 83,442 units in 2015 to 100,470 units in 2019, their utilization remains suboptimal. Nationally, the coverage of older adult health services in 2021 reached 70.79% [2], while West Sumatra Province reported a similar figure of approximately 70% [3]. However, these aggregate statistics do not fully capture the disparities at the primary care level, particularly within individual health center that serve as the operational backbone of community health services.

Several determinants influence older adults' attendance at *Posyandu Lansia*, including knowledge, distance, family support, availability of supporting facilities and infrastructure, attitudes and behaviors of older adults, economic status, and support from health workers [4]. According to the 2021 Annual Report of the Padang City Health Office, the coverage of older adult health services did not meet the expected target, largely due to disruptions caused by the COVID-19 pandemic, which necessitated changes in service delivery methods, including the postponement of *Posyandu Lansia* activities [3]. Data from the 2021 Annual Report of Belimbing Health Center show that the coverage of older adult health services was only 34.3% in 2021, a decline from 38.32% in 2020. These figures indicate persistently low service utilization, far below the expected target. The absence of older adults from *Posyandu* has serious implications, including missed opportunities for early detection of chronic diseases, which may lead to severe complications and increased hospital treatment costs. The gap from the 2021 target remained substantial at 63.7%.

Belimbing Health Center serves a population of 66,656 people, of whom 13.9% (4,774 individuals) are older adults. However, only 1,003 older adults or 32.8% received health services that met the national standards. This low utilization underscores the urgency of investigating the determinants of older adults' participation, especially given the declining service coverage and the persistent gap from the expected performance indicators [5]. Therefore, the objective of this study is to identify factors associated with the utilization of *Posyandu Lansia* in the working area of Belimbing Health Center, Padang City, West Sumatra Province.

### METHODS

This study was carried out in the working area of Belimbing Health Center, located in Padang City, West Sumatra Province, during the 2023–2024 period, encompassing the stages of preparation, sampling, and field data collection. The research adopted a quantitative analytic approach with a cross-sectional design, allowing the investigators to examine the relationship between several independent variables and the utilization of the *Posyandu Lansia* at a single point in time.

The population consisted of all older adults residing within the service area of health center, totaling 1,971 individuals. The minimum sample size was determined using the Lemeshow formula, with an assumed population proportion of 0.5, a 95% confidence interval, and a margin of error of 0.1. An additional 10 percent was included to anticipate potential non-response, resulting in a final sample requirement of 107 older adults. Sampling was conducted using a proportional probability-to-size technique across the five *Posyandu Lansia* operating under Belimbing Health Center. The number of respondents selected from each *posyandu* was calculated proportionally to the number of older adults registered in each site. This procedure produced a distribution of 21 respondents for *Posyandu A*, 23 for *Posyandu B*, 22 for *Posyandu C*, 23 for *Posyandu D*, and 18 for *Posyandu E*. Within each *posyandu*, simple random sampling was performed using a lottery method, in which the names of older adults were drawn until the required quota for each site was fulfilled. This approach ensured that every eligible older adult had an equal probability of being selected.

The study examined one dependent variable, namely the utilization of the *Posyandu Lansia*, and several independent variables, including knowledge of the *posyandu*, attitudes toward participation, distance from home to the service location, family support, and support from health workers. Data were collected using a structured questionnaire adapted from previously validated instruments. The questionnaire had undergone validity testing using the Pearson Product Moment correlation and reliability testing using Cronbach's Alpha, with all constructs achieving coefficients above 0.60, indicating that the instrument met the standards of internal consistency required for research involving behavioral and perceptual measures. The questionnaire captured respondents' knowledge through multiple-choice and Likert-type items, assessed attitudes using a Likert scale, and measured perceived distance, family support, and health worker support according to operational definitions established prior to data collection.

Data analysis was conducted in two stages. Descriptive analysis was used to describe the distribution of each variable in terms of frequencies and percentages. Bivariate analysis was then performed using the Chi-square test to determine the association between each independent variable and the utilization of the *Posyandu Lansia*, with a significance level set at  $\alpha = 0.05$ . This analytical approach enabled the identification of factors that demonstrated statistically meaningful relationships with service utilization among older adults.

## RESULTS

The findings of this study (Table 1) show that the majority of respondents were women (93.5%). Most respondents were older adults aged over 60 years (67.3%), and a large proportion were not employed (72.9%). Furthermore, 68.2% of respondents had a low level of education. In terms of cognitive and psychosocial characteristics, 92.5% demonstrated good knowledge, all respondents (100%) exhibited a positive attitude, 70.1% received family support, and 90.7% received support from health workers. Additionally, all respondents (100%) lived within a close distance to the *Posyandu Lansia* (<2 km).

Based on Table 2, more than half of the respondents utilized the *Posyandu Lansia*, defined as attending the service at least four times within the past six months (64.5%). Table 3 indicates that the proportion of respondents who did not utilize the *Posyandu Lansia* was higher among those with good knowledge (37.4%) compared with those who had poor knowledge (12.5%). The statistical test yielded a p-value of

Table 1. Distribution of sex, age, occupation, education, knowledge, attitude, family support, health worker support, and distance to the *Posyandu Lansia*

Variable	Frequency	Percentage
Sex		
Female	100	93.5
Male	7	6.5
Age		
Pre-elderly (45–59 years)	35	32.7
Elderly (>60 years)	72	67.3
Occupation		
Not employed	78	72.9
Employed	29	27.1
Education		
Low	73	68.2
High	34	31.8
Knowledge		
Good	99	92.5
Poor	8	7.5
Attitude		
Positive	107	100.0
Negative	0	0.0
Family support		
Supportive	75	70.1
Not supportive	32	29.9
Health worker support		
Supportive	97	90.7
Not supportive	10	9.3
Distance		
Near (<2 km)	107	100.0
Far ( $\geq 2$ km)	0	0.0

Table 2. Distribution of *Posyandu Lansia* utilization

Utilization	Frequency	Percentage
Utilized	69	64.5
Not utilized	38	35.5

Table 3. Association between independent variables and *Posyandu Lansia* utilization

Variable	Utilized		Not utilized		p-value	POR (95% CI)
	Frequency	Percentage	Frequency	Percentage		
Sex					0.697	1.393 (0.295–6.578)
Female	65	65.0	35	35.0		
Male	4	57.1	3	42.9		
Age					0.689	1.309 (0.555–3.089)
Pre-elderly	24	68.6	11	31.4		
Elderly	45	62.5	27	37.5		
Occupation					1.000	0.940 (0.384–2.299)
Not employed	50	64.1	28	35.9		
Employed	19	65.5	10	34.5		
Education					0.803	1.227 (0.519–2.904)
High	23	67.6	11	32.4		
Low	46	63.0	27	37.0		
Knowledge					0.255	0.239 (0.028–2.023)
Good	62	62.4	37	37.4		
Poor	7	87.5	1	12.5		
Attitude					NA	–
Positive	69	64.5	38	35.5		
Negative	0	0.0	0	0.0		
Family support					0.032*	3.255 (1.188–8.754)
Supportive	26	81.2	6	18.8		
Not supportive	43	57.3	32	42.7		
Health worker support					1.000	0.754 (0.185–3.124)
Supportive	62	63.9	35	36.1		
Not supportive	7	70.0	3	30.0		
Distance					NA	–
Near	69	64.5	38	35.5		
Far	0	0.0	0	0.0		

0.255, suggesting that there was no significant association between knowledge and the utilization of the *Posyandu Lansia*. In contrast, the proportion of non-utilization was notably higher among respondents who did not receive family support (42.7%) compared with those who received

supportive family involvement (18.8%). This association was statistically significant ( $p = 0.032$ ), indicating that family support plays an important role in determining whether older adults utilize the *Posyandu Lansia*.

## DISCUSSION

The study demonstrated a significant association between family support and the utilization of the *Posyandu Lansia* in the Belimbing Health Center. Older adults who did not utilize the service were predominantly those who lacked family support. This finding is consistent with previous studies showing that older adults who receive family support are more likely to attend the *Posyandu Lansia* regularly [12]. Another study reported that 80.2% of respondents with good family support continued to visit the *Posyandu*, while some older adults without family support still attended due to close distance and neighbor accompaniment [8]. Lack of support refers to family members not reminding older adults of the schedule, not asking about the results, and being unable to accompany them due to work obligations.

These findings indicate that health-seeking behavior among older adults in Belimbing Health Center is not an autonomous decision but a collective one, heavily influenced by household members. In Green's model, family support acts as a reinforcing factor that provides emotional, informational, and instrumental assistance. Instrumental and informational support; such as reminders and accompaniment were identified as the most crucial yet often neglected forms of support. Busy work schedules among family members in Padang often result in older adults being overlooked in daily health routines. Thus, strengthening family involvement, particularly in daily nutrition and routine reminders, is essential to improving preventive health behavior among older adults.

The study found no significant association between sex and the utilization of the *Posyandu Lansia*. Although women constituted the majority of visitors (93.5%), sex was not a predictor of service utilization. Previous studies similarly reported higher female attendance, yet the lack of statistical significance suggests behavioral homogeneity across genders. Sociocultural norms in Padang may contribute to lower male participation, as *Posyandu* activities are often perceived as feminine or domestic. Some older men prefer private clinical visits rather than group-based activities dominated by women. These findings imply that outreach strategies should be gender-responsive, utilizing culturally relevant male-dominated spaces such as mosques or community religious gatherings to improve male participation.

Based on the study findings, the majority of respondents were in the age category above 60 years. Statistically, no significant association was found between age and the level of *Posyandu Lansia* utilization in the Belimbing Health Center. This result reinforces that chronological age is not a single determining factor that dictates older adults' behavior in accessing preventive health services. The finding is consistent with previous research reporting no significant association between age and participation in *Posyandu* activities [10]. These results indicate a relative homogeneity of health-care needs across different age groups of older adults in the Belimbing Health Center. Theoretically, increasing age is often associated with physiological decline that elevates the need for regular health monitoring. However, the absence of statistical significance suggests that the motivation to attend the *Posyandu* is more strongly influenced by psychological factors; such as perceived susceptibility rather than age itself. Both those who have just entered older adulthood (60–69 years) and those who are older appear to share similar awareness of the importance of early detection of chronic conditions such as hypertension.

The researchers noted that physical independence may act as a confounding variable that obscures the relationship between age and attendance. Younger older adults (60–65 years) may have higher mobility but are often occupied with domestic responsibilities or caring for grandchildren, limiting their available time. Conversely, older individuals may have more free time but face mobility limitations that hinder their ability to walk to the *Posyandu*. This explains why the descriptive dominance of respondents aged >60 years [8, 11] does not automatically translate into statistical significance. In the Belimbing Health Center, access barriers among the oldest adults are often compensated by family members who accompany them, while younger older adults may experience competing priorities. Therefore, *Posyandu* management strategies should not focus solely on specific age groups. Service delivery must remain inclusive, recognizing that basic health monitoring needs are universal among older adults. Additional emphasis is needed to improve physical accessibility for the oldest age groups so that functional limitations do not become a permanent barrier to receiving standard preventive health services.

The study found no significant association between occupation and *Posyandu* utilization. Although most respondents aged above 60 years were already retired and not working outside the home, this did not guarantee active participation in *Posyandu* activities. This finding indicates that employment status is not a primary determinant of health-seeking behavior among older adults. Among the 78 older adults who were not working, 50 utilized the *Posyandu*. Non-working older adults tended to participate because they had more flexible time, allowing them to attend *Posyandu* sessions. However, this challenges the common assumption that having abundant free time automatically leads to higher participation. Theoretically, time availability is an enabling factor, but in health behavior, time alone does not translate into action without internal motivation or external encouragement. Retired older adults often experience reduced physical activity and diminished social engagement, leading them to spend more time resting at home rather than engaging in preventive activities.

The lack of statistical significance may also be influenced by the fact that *Posyandu* activities are conducted in the morning. For older adults who still engage in small informal economic activities; such as market vending or farming these schedules may conflict with their income-generating routines. However, because most respondents in the Belimbing Health Center area were not working [7, 12], the variable "occupation" loses its discriminatory power in differentiating behavior across individuals. Therefore, health-care providers in Belimbing Health Center must recognize that simply adjusting *Posyandu* schedules to accommodate free time is insufficient. The core issue is not the availability of time but the need to build awareness that maintaining health in older age is a priority rather than a secondary activity. Educational approaches should emphasize long-term health benefits so that older adults are willing to allocate time for preventive care rather than waiting for leftover free time.

The study found no significant association between education level and *Posyandu* utilization, consistent with previous findings that education does not influence participation in *Posyandu* activities [6]. Although most respondents had low educational attainment, the proportion of those actively utilizing the *Posyandu* remained high. This suggests that formal education is neither a barrier nor a primary driver of older adults' access to basic health services. Nevertheless, higher education remains important for enhancing understanding of healthy living, including the importance of routine *Posyandu* visits. Education influences knowledge, which in turn shapes individual health behavior. However, the lack of statistical significance indicates a dissociation between formal education and practical health behavior among older adults. In health behavior theory, formal education is typically considered a predisposing factor that facilitates information absorption. Yet among older adults, "functional knowledge; derived from life experience and repeated exposure to information appears more influential than formal education completed decades earlier.

Previous findings show that most respondents had no formal schooling, while only a small proportion had secondary education [9]. Among the 73 older adults with low education, 46 utilized the *Posyandu*. This indicates that low education does not necessarily hinder learning or participation. Older adults with limited formal education still attended the *Posyandu* because they gained understanding through non-formal

channels such as interpersonal communication and encouragement from *Posyandu* cadres. In the Belimbing Health Center area, this phenomenon is supported by strong social capital and oral communication patterns. In densely populated urban communities like Padang, health information is often disseminated through mosque announcements, word-of-mouth communication, and active home visits by *Posyandu* cadres. These interpersonal approaches compensate for limited literacy and ensure that older adults feel comfortable attending the *Posyandu*, which they perceive as a familiar social environment rather than an intimidating medical institution.

Thus, the lack of formal education among most older adults in Belimbing Health Center is offset by direct, community-based communication methods. This explains why older adults with low education do not feel reluctant to attend the *Posyandu*. However, challenges remain for those with higher education, who may have different expectations of service quality or prefer independent health-seeking methods. Therefore, inclusive service approaches that accommodate all educational backgrounds remain essential for program success in this area.

The study findings indicate that the proportion of older adults who did not utilize the *Posyandu Lansia* was higher among respondents with good knowledge compared with those who had poor knowledge. Despite this descriptive pattern, statistical testing showed no significant association between knowledge and *Posyandu* utilization. This presents a unique anomaly in which better knowledge does not translate into higher service utilization. The absence of a significant relationship suggests a misalignment between the cognitive domain (knowing) and the behavioral domain (acting). Theoretically, Rogers posits that knowledge-based behavior tends to be enduring; however, in this case, good knowledge did not serve as a sufficient stimulus to motivate older adults to attend the *Posyandu*. According to the Health Belief Model, knowledge of schedules and service objectives represents only a basic informational level. Without low perceived barriers or strong perceived benefits, such knowledge remains passive and does not manifest as actual behavior. This aligns with previous findings showing that among 68 respondents with adequate knowledge, 35 did not utilize the *Posyandu*, confirming no significant association between knowledge and utilization [7].

The researchers assessed that knowledge among older adults in the Belimbing Health Center area remains superficial. Respondents may understand that the *Posyandu* is important, yet they do not fully grasp the strategic value of monitoring tools such as the The Child Health Monitoring Card (*Kartu Menuju Sehat*, KMS) or early detection of degenerative disease risks. Limited understanding of the KMS leads older adults to feel they “already know” their health status without perceiving the need for routine documentation. Additionally, some older adults with good knowledge may exhibit overconfidence in their physical condition or prefer to seek health information independently through social media or television rather than attending group-based *Posyandu* activities. This is reinforced by other studies showing that high knowledge levels do not always correlate with active participation when not accompanied by strong internal motivation [7, 13]. Critically, these nonsignificant results highlight the need for health education in the Belimbing Health Center to shift from merely conveying information (what and when the *Posyandu* is held) toward addressing the affective domain (why older adults need to attend). Emphasis on the function of the KMS as a personal health record must be strengthened so that knowledge becomes more than schedule memorization; it must evolve into an internalized understanding that fosters a perceived need for routine and independent health monitoring.

The study showed that the proportion of respondents with positive attitudes was higher among those who utilized the *Posyandu Lansia* compared with those who did not. This finding indicates that mental readiness and subjective evaluation of health services form the foundation of routine attendance behavior. Previous research also reported that older adults with poor attitudes were 4.3 times more likely not to utilize the *Posyandu* [8]. Analytically, attitude serves as a behavioral determinant that functions as a “filter” before action is taken. According to Ajzen’s Theory of Planned Behavior, attitudes toward a behavior are shaped by beliefs about the outcomes of that behavior. Older adults with positive attitudes perceive the *Posyandu* as an investment in health rather than a burden or monotonous routine. Conversely, negative attitudes often stem from misconceptions, such as believing that attending the *Posyandu* is unnecessary when one does not feel ill. The elevated risk of non-attendance among those with poor attitudes underscores that the primary barrier is not physical access but psychological resistance.

This finding is consistent with other studies reporting that most respondents had positive attitudes [7], and that the proportion of *Posyandu* utilization was higher among those with positive attitudes compared with those with negative attitudes [14]. Attitude represents an internal reaction to a stimulus and is shaped by daily interactions [15]. In the Belimbing Health Center, attitude formation is strongly influenced by past experiences and communal social dynamics. The communal nature of the local community means that older adults’ attitudes often reflect the attitudes of their peer group. When peers view the *Posyandu* positively; for example, as a pleasant social gathering older adults tend to adopt similar attitudes.

The researchers also noted that positive attitudes among most respondents were influenced by the quality of service provided by health workers and cadres. Affective evaluations of cadre friendliness contribute to a disposition that supports repeat attendance. However, the presence of older adults with good knowledge but passive attitudes indicates that knowledge alone is insufficient unless internalized into supportive attitudes. Given the strong correlation between attitude and behavior [15], interventions in the Belimbing Health Center area must prioritize perception management. Health education should not be limited to medical or technical information but must also reshape the “image” of the *Posyandu* into a comfortable and dignified space for older adults. Transforming negative attitudes into positive ones through peer-group testimonials may be more effective than formal advisories, as attitudes are more easily shaped through familiar social interactions.

The study findings show that the proportion of older adults who did not utilize the *Posyandu Lansia* was higher among respondents who reported receiving support from health workers. This indicates that the performance of health center staff in delivering services is already optimal; however, optimal service quality does not automatically translate into increased attendance among older adults. Most older adults felt they had received adequate support from health workers, yet this did not significantly influence their frequency of visits. Analytically, this nonsignificant result suggests the presence of a ceiling effect, in which the quality of health-worker support is uniformly perceived as good, leaving little variability to explain differences in attendance. In health behavior theory, health-worker support functions as a reinforcing factor that helps maintain behavior. However, such support can only be delivered once older adults are physically present at the *Posyandu*. Thus, health-worker support acts more as a satisfier that sustains retention rather than a primary trigger that motivates older adults to leave their homes and attend the *Posyandu*.

The statistical analysis confirmed no significant association between health-worker support and *Posyandu* utilization. Previous research similarly found that although older adults who perceived cadre and health-worker services as good tended to have better attendance, service quality itself was not a determining factor in *Posyandu* participation [16]. In the Belimbing Health Center, health workers such as nurses, midwives, and nutritionists have performed promotive roles effectively through counseling and friendly service. However, their influence is limited by physical reach; health workers operate within the *Posyandu* site, whereas the main barriers; such as lack of family support for transportation or low personal motivation occur before older adults arrive at the service point.

This explains why the findings align with previous studies [9,16]: satisfaction with health workers is essential to prevent older adults from discontinuing attendance, but satisfaction alone cannot overcome household-level barriers. Even optimal support becomes statistically insignificant when older adults lack the means to reach the *Posyandu*. Other studies also reported that most respondents were satisfied with the attitude of health workers during *Posyandu* activities, while a smaller proportion expressed dissatisfaction [9]. Research in Tenayan Raya Health

Center, Pekanbaru similarly found that most health workers played active roles in *Posyandu* implementation [17]. Health workers' roles include encouraging older adults to participate, providing friendly service, delivering health promotion, and explaining examination results. Such promotive efforts can increase interest and motivation among older adults to remain active in *Posyandu* activities.

Therefore, although the association was not statistically significant, the role of health workers remains important. Future strategies in Belimbing Health Center should expand the role of health workers beyond service delivery on the day of the *Posyandu*, positioning them as community organizers. Health workers need to intensify education not only for older adults but also for their families, ensuring that service-based support aligns with instrumental support at home. In this way, the already high quality of health-worker performance can be translated into higher and more consistent attendance.

Older adults with difficult access or long distances to the *Posyandu* were less likely to utilize the service compared with those living near the activity site. This is consistent with previous findings from the Tapung II Health Center [8]. Analytically, distance is not merely a physical measurement in kilometers but represents the broader access cost: financial, temporal, and physical that older adults must expend. According to the Health Belief Model, structural factors such as distance function as perceived barriers. For older adults with declining motor function, long distances are perceived as physical risks, such as fatigue or falls, that outweigh the perceived benefits of attending the *Posyandu*. Poor road conditions and limited access to health services further discourage utilization. The Health Belief Model states that structural access factors strongly influence decisions to use or not use health services [18]. This aligns with findings showing that more than half of older adults had easy access to the *Posyandu* [19]. Another study reported that among 144 respondents, 80 lived more than 1 km from the *Posyandu*, while 64 lived within 1 km [20]. Similarly, more than half of respondents in another study lived close to the *Posyandu* [6,21].

In the Belimbing Health Center, distance becomes a critical variable due to geographic and infrastructural characteristics. Although administratively urban, some areas have road contours that are not elderly-friendly, compounded by limited public transportation reaching RW-level *Posyandu* sites. The researchers noted that distances greater than 1 km become absolute barriers without family support for transportation. Interestingly, some older adults living near the *Posyandu* still did not attend if the route was perceived as unsafe, such as crossing busy roads or rivers. This indicates that perceived accessibility is subjective; proximity on a map does not necessarily equate to perceived safety.

Critically, these findings imply that the success of the *Posyandu Lansia* in Belimbing Health Center depends heavily on proactive outreach strategies. *Posyandu* locations should be placed closer to clusters of older adult residences rather than based solely on administrative convenience. If relocation is not feasible, strengthening family-based instrumental support or providing transportation assistance through cadres becomes essential to mitigate structural barriers. This ensures that distance no longer becomes a justification for older adults to forgo their right to preventive health services.

## Study limitations

This study has several limitations. Data collection through interviews was challenged by the difficulty of locating some older adults during the research period, as many were not at home. This required repeated visits and re-listing of respondents. Additionally, frequent postponements of *Posyandu* schedules hindered the research timeline. These challenges reflect the dynamic mobility of older adults in the Belimbing Health Center, where many remain socially active despite being in the non-productive age group. Such difficulties may introduce selection bias, as respondents who were successfully interviewed may represent those with more free time or better physical condition, potentially underrepresenting older adults who were busier or unwell. Repeated schedule delays also highlight managerial issues that may contribute to low *Posyandu* utilization. To address these limitations, the researchers coordinated with program managers, health workers, cadre leaders, and community figures to confirm schedules, arrange appointments with respondents, and conduct cross-sectoral coordination. These mitigation strategies helped maintain data validity and ensure that the sample target was achieved.

## CONCLUSION

The study concludes that the utilization of the *Posyandu Lansia* is determined solely by family support. This domestic support system functions as the decisive driver of older adults' preventive health behavior, shaping their ability and willingness to attend routine services. Emotional encouragement, informational reminders, and instrumental assistance collectively form the core mechanism through which family involvement enables consistent participation in the *Posyandu*.

## Ethical consideration, competing interest and source of funding

- Ethical considerations were observed throughout the research process. Inclusion criteria required participants to be older adults who attended the *Posyandu Lansia*, resided within the Belimbing Health Center, and voluntarily agreed to participate. Older adults who were unable to communicate or were unavailable during the data collection period were excluded. Informed consent was obtained from all respondents, and confidentiality of personal information was strictly maintained. The study adhered to the ethical principles of autonomy, beneficence, non-maleficence, and justice, ensuring that participation was voluntary and that respondents were treated with respect and fairness.
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