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Determinants of the Utilization of Integrated Primary Care Services (ILP) Posyandu Among Older Adults in East Pekalongan District in 2026

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ABSTRACT

Integrated Primary Care Services (ILP) Posyandu is a community-based health program designed to improve the health status of older adults through integrated, comprehensive, and continuous healthcare services. However, the utilization of ILP Posyandu among older adults in East Pekalongan District remains suboptimal due to various predisposing, enabling, and reinforcing factors. This study aimed to analyze the determinants of ILP Posyandu utilization among older adults in East Pekalongan District in 2026. A quantitative analytical study with a cross-sectional design was conducted involving 99 older adults selected through purposive sampling with proportional distribution across urban villages. Data were collected using a validated and reliable structured questionnaire and analyzed using the Chi-square test and binary logistic regression. The results showed that the availability of healthcare facilities (p = 0.000), access to healthcare service locations (p = 0.003), family support (p = 0.001), and community health volunteer (cadre) support (p = 0.000) were significantly associated with ILP Posyandu utilization. In contrast, healthcare resources (p = 0.466) were not significantly associated with utilization. Multivariate analysis identified the availability of healthcare facilities (p = 0.024; Exp(B) = 0.272) and community health volunteer (cadre) support (p = 0.012; Exp(B) = 0.225) as the most influential determinants. Strengthening healthcare facilities and community health volunteer support is recommended to improve ILP Posyandu utilization.

Keywords: Integrated Primary Care Services (ILP) Posyandu, older adults, utilization, determinants.

INTRODUCTION

Population ageing has become one of the major public health challenges in Indonesia. According to Statistics Indonesia (BPS, 2023), older adults aged 60 years and above account for 11.75% of the total population, equivalent to more than 29 million people, indicating that Indonesia has entered the ageing population phase. Although this demographic transition reflects improvements in life expectancy and healthcare development, it also increases the burden of chronic diseases among older adults.

Hypertension, diabetes mellitus, heart disease, stroke, and other non-communicable diseases (NCDs) require continuous healthcare, regular monitoring, and effective disease management to prevent complications and maintain quality of life. Therefore, healthcare services for older adults should emphasize not only curative care but also promotive and preventive interventions.

To address these challenges, the Indonesian government has strengthened primary healthcare through the implementation of Integrated Primary Care Services (ILP) Posyandu, a community-based health program that integrates promotive, preventive, curative, and rehabilitative services. ILP Posyandu aims to improve access to healthcare through routine health screening, health education, monitoring of chronic diseases, counseling, referral services, and active community participation. By bringing healthcare services closer to communities, ILP Posyandu is expected to increase the utilization of primary healthcare services among older adults and support healthy ageing.

Despite its nationwide implementation, the utilization of ILP Posyandu among older adults remains suboptimal. Many older adults still seek healthcare only after experiencing illness, while routine preventive health examinations remain uncommon. Data from the Pekalongan City Health Office (2023) showed that only approximately 45% of older adults regularly participated in ILP Posyandu activities. Furthermore, a preliminary survey conducted in East Pekalongan District found that attendance during the previous three months reached only about 38%, considerably lower than the expected target of 75%. These findings indicate that substantial barriers continue to limit the utilization of ILP Posyandu among older adults.

Previous studies have reported that healthcare utilization among older adults is influenced by multiple factors, including individual characteristics, family support, healthcare accessibility, and service quality. Older adults with better knowledge and positive attitudes toward health services are more likely to utilize preventive healthcare. In addition, family assistance, adequate healthcare facilities, accessible service locations, and active support from healthcare professionals and community health volunteers (cadres) have been identified as important factors that encourage regular participation in community-based health programs. However, previous studies have generally focused on only a limited number of determinants and have not comprehensively examined predisposing, enabling, and reinforcing factors within the framework of Lawrence Green's behavioral model.

Furthermore, evidence regarding the determinants of ILP Posyandu utilization in East Pekalongan District remains limited, particularly studies employing multivariate analysis to identify the most influential determinants after controlling for other variables. Understanding these determinants is essential for developing effective interventions to increase participation among older adults and improve the performance of community-based primary healthcare services.

Therefore, this study aimed to analyze the determinants of Integrated Primary Care Services (ILP) Posyandu utilization among older adults in East Pekalongan District in 2026. The findings are expected to provide empirical evidence for policymakers and primary healthcare providers in designing strategies to strengthen healthcare facilities, improve service accessibility, enhance family and community health volunteer support, and ultimately increase the utilization of ILP Posyandu among older adults.

METHODS

This study employed a quantitative analytical approach with a cross-sectional design to examine the determinants of Integrated Primary Care Services (ILP) Posyandu utilization among older adults. The study was conducted in East Pekalongan District, Pekalongan City, Indonesia, in 2026. The study population comprised older adults aged 60 years and above who were registered as ILP Posyandu beneficiaries and had chronic diseases requiring regular health monitoring, including hypertension, diabetes mellitus, heart disease, stroke, and other chronic conditions. A total of 99 respondents were included in the study. Participants were selected using purposive sampling with proportional allocation across all urban villages in the study area. Eligible respondents were older adults who met the inclusion criteria and agreed to participate by providing written informed consent.

Data were collected using primary and secondary sources. Primary data were obtained through a structured questionnaire administered directly to respondents, while secondary data were obtained from the Pekalongan City Health Office, East Pekalongan Primary Health Center, and the New SIGA database. Before the main survey, the questionnaire was tested for validity and reliability to ensure the accuracy and consistency of the measurement instrument. The dependent variable was ILP Posyandu utilization. Independent variables were classified according to Lawrence Green's behavioral model

into predisposing factors (age, sex, educational level, knowledge, and attitudes), enabling factors (availability of healthcare facilities, accessibility of service locations, and healthcare resources), and reinforcing factors (family support, community health volunteer [cadre] support, and healthcare worker support). The questionnaire consisted of validated items measured using Guttman and Likert scales according to the characteristics of each variable.

Data were analyzed using statistical software. Descriptive statistics were used to summarize respondents' characteristics and study variables. Associations between independent variables and ILP Posyandu utilization were analyzed using the Chi-square test. Variables with a p-value < 0.25 in the bivariate analysis were included in a multivariate binary logistic regression model to identify the most influential determinants. Statistical significance was set at $p < 0.05$, and the results are presented as odds ratios (ORs), 95% confidence intervals (95% CIs), and p-values.

RESULTS

Univariate Analysis

Univariate analysis was conducted to describe the distribution of the study variables among 99 older adults in East Pekalongan District. The results are presented as frequencies and percentages.

Table 1. Characteristics of Respondents and Distribution of Study Variables (n = 99)

Characteristics / Variables	Dominant Category	n (%)
Age	Older adults	91 (91.9)
Sex	Female	92 (92.9)
Educational level	Secondary education	60 (60.6)
Type of disease	Rheumatism	43 (43.4)
Knowledge	Poor	68 (68.7)
Attitude	Negative	88 (88.9)
Availability of healthcare facilities	Supportive	99 (100.0)
Accessibility of service locations	Easy	55 (55.6)
Healthcare resources	Good	99 (100.0)
Family support	Supportive	99 (100.0)
Community health	Supportive	99 (100.0)

volunteer and healthcare worker support		
ILP Posyandu utilization	Good	61 (61.6)

Table 1 presents the characteristics of the respondents and the distribution of the study variables among 99 older adults in East Pekalongan District. Most respondents were categorized as older adults (91.9%), were female (92.9%), had a secondary level of education (60.6%), and had rheumatism as the most common chronic disease (43.4%). Regarding the study variables, most respondents had poor knowledge (68.7%) and negative attitudes (88.9%) toward ILP Posyandu. All respondents perceived the availability of healthcare facilities, healthcare resources, family support, and community health volunteer and healthcare worker support as supportive (100.0%). More than half of the respondents reported easy access to ILP Posyandu service locations (55.6%). Regarding the dependent variable, 61 respondents (61.6%) demonstrated good utilization of ILP Posyandu, while 38 respondents (38.4%) had poor utilization.

Bivariate Analysis

Table 2. Bivariate Analysis of Factors Associated with ILP Posyandu Utilization (Chi-Square Test)

Variables	**p-value**	**Association**
Predisposing factors		
Knowledge	0.624	Not significant
Attitude	0.422	Not significant
Enabling factors		
Availability of healthcare facilities	<0.001	Significant
Accessibility of service locations	0.003	Significant
Healthcare resources	0.466	Not significant
Reinforcing factors		
Family support	0.001	Significant
Community health volunteer and healthcare worker support	<0.001	Significant

Table 2 presents the results of the bivariate analysis examining the associations between

predisposing, enabling, and reinforcing factors and ILP Posyandu utilization among older adults using the Chi-square test. Among the predisposing factors, knowledge ($p = 0.624$) and attitude ($p = 0.422$) were not significantly associated with ILP Posyandu utilization. Among the enabling factors, the availability of healthcare facilities ($p < 0.001$) and accessibility of service locations ($p = 0.003$) showed significant associations with ILP Posyandu utilization, whereas healthcare resources were not significantly associated ($p = 0.466$). Regarding the reinforcing factors, family support ($p = 0.001$) and community health volunteer and healthcare worker support ($p < 0.001$) were significantly associated with ILP Posyandu utilization.

Table 3. Multivariate Logistic Regression Analysis of Factors Associated with ILP Posyandu Utilization

Variables	B	SE	Wald	p-value	Exp(B)
Availability of healthcare facilities	-1.303	0.579	5.071	0.024	0.272
Accessibility of service locations	-0.216	0.603	0.128	0.806	0.806
Family support	-0.210	0.631	0.111	0.739	0.810
Community health volunteer and healthcare worker support	-1.493	0.591	6.385	0.012	0.225
Constant	1.153	0.411	7.875	0.005	3.169

Binary logistic regression analysis was performed to identify the factors independently associated with ILP Posyandu utilization among older adults. As shown in Table 3, the availability of healthcare facilities ($p = 0.024$; Exp(B) = 0.272) and community health volunteer and healthcare worker support ($p = 0.012$; Exp(B) = 0.225) remained significantly associated with ILP Posyandu utilization after adjustment for other variables. In contrast, accessibility of service locations ($p = 0.806$) and family support ($p = 0.739$) were not significantly associated with ILP Posyandu utilization in the final regression model.

DISCUSSION

This study found that enabling and reinforcing factors had a greater influence on ILP Posyandu utilization among older adults compared with predisposing factors. The results showed that the availability of healthcare facilities and support from community health volunteers and healthcare workers remained significant factors associated with ILP Posyandu utilization after multivariate analysis. These findings support Lawrence Green's behavioral model, which explains that health behavior is influenced not only by individual characteristics but also by enabling factors that facilitate access to services and reinforcing factors that encourage individuals to maintain health behaviors.

The availability of healthcare facilities was identified as an important factor associated with ILP Posyandu utilization. Adequate facilities, including examination equipment, comfortable service areas, and supporting health infrastructure, can increase older adults' confidence and willingness to utilize healthcare services. For older adults with chronic diseases, the availability of appropriate facilities is essential because regular monitoring of health conditions requires accessible and reliable services. A healthcare service that provides complete and comfortable facilities may create a positive experience, which encourages older adults to attend Posyandu ILP regularly. This finding indicates that strengthening primary healthcare infrastructure is an important strategy to improve the utilization of community-based health services.

Support from community health volunteers and healthcare workers was also found to be an important determinant of ILP Posyandu utilization. Community health volunteers play a strategic role as a bridge between healthcare providers and the community through health education, reminders of service schedules, home visits, and assistance for older adults. Meanwhile, healthcare workers provide professional support through health examinations, counseling, and disease monitoring. Continuous interaction between older adults and healthcare providers can increase trust, motivation, and awareness to participate in health programs. Therefore, strengthening the capacity and involvement of community health volunteers and healthcare workers is essential for improving participation in ILP Posyandu.

Accessibility of service locations and family support were significantly associated with ILP Posyandu utilization in the bivariate analysis; however, these factors were not significant after adjustment in the multivariate model. This finding suggests that the effect of these factors may be influenced by other variables, particularly healthcare

facilities and support from community health volunteers and healthcare workers. Although easy access and family assistance remain important for older adults, their influence may become less dominant when adequate services and strong community support systems are available.

In this study, knowledge and attitude were not significantly associated with ILP Posyandu utilization. This finding suggests that good knowledge and positive attitudes alone may not always result in actual health service utilization among older adults. Older adults may understand the benefits of health checks but still experience barriers related to physical limitations, mobility problems, or dependence on others for accessing healthcare services. In addition, the relatively similar responses among respondents may reduce the statistical variation, making the relationship between knowledge, attitude, and utilization difficult to detect.

Healthcare resources were also not significantly associated with ILP Posyandu utilization. This may occur because most respondents perceived healthcare resources as adequate, resulting in limited variation between respondents. In this condition, healthcare resources may no longer become a distinguishing factor affecting service utilization. Instead, factors that are more directly experienced by older adults, such as facility availability and interaction with community health volunteers and healthcare workers, may have a stronger influence on their decision to utilize ILP Posyandu.

The findings of this study provide important implications for improving elderly health services through ILP Posyandu. Primary healthcare facilities and local health authorities should prioritize improving service facilities, maintaining elderly-friendly environments, and strengthening the role of community health volunteers and healthcare workers. Continuous education, active follow-up, and community-based approaches involving families are also needed to increase older adults' participation. Strengthening these factors is expected to improve the sustainability of ILP Posyandu utilization and support better health outcomes among older adults.

CONCLUSION

This study identified the factors associated with the utilization of Integrated Primary Healthcare (ILP) Posyandu among older adults in East Pekalongan District. Bivariate analysis showed that the availability of healthcare facilities, accessibility of service locations, family support, and community health volunteer and healthcare worker support

were significantly associated with ILP Posyandu utilization. However, multivariate logistic regression revealed that only the availability of healthcare facilities and community health volunteer and healthcare worker support remained independently associated with ILP Posyandu utilization. These findings highlight the importance of ensuring adequate healthcare facilities and strengthening the roles of community health volunteers and healthcare workers to improve the utilization of ILP Posyandu among older adults. Future interventions should focus on improving healthcare service accessibility, strengthening community-based support, and promoting active participation of older adults in ILP Posyandu programs.

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