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The Relationship Between Knowledge, Attitude, Family Support, and Perception of the Role of Cadres with Regular Posyandu Visits by Mothers of Toddlers in Talang Kelapa Subdistrict, Palembang City

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ABSTRAK

Posyandu merupakan simpul pemantauan pertumbuhan balita dalam Integrasi Layanan Primer, tetapi manfaatnya bergantung pada kunjungan rutin ibu. Penelitian ini menganalisis hubungan pengetahuan, sikap, dukungan keluarga, dan persepsi peran kader dengan kunjungan rutin posyandu. Studi potong lintang dilakukan di Kelurahan Talang Kelapa, Kota Palembang, pada 2026 terhadap 40 ibu balita. Data wawancara terstruktur dianalisis dengan uji eksak Fisher, *odds ratio* (OR) kasar, dan rasio prevalensi dengan interval kepercayaan (IK) 95%. Sebanyak 67,5% ibu berkunjung rutin. Kunjungan rutin lebih tinggi pada ibu berpengetahuan baik (83,3% vs 43,8%; OR 6,43; IK 95% 1,49–27,65), bersikap positif (80,0% vs 46,7%; OR 4,57; 1,12–18,73), mendapat dukungan keluarga (80,8% vs 42,9%; OR 5,60; 1,33–23,62), dan menilai peran kader baik (78,6% vs 41,7%; OR 5,13; 1,19–22,11). Interval kepercayaan lebar dan tidak ada nilai p yang tetap bermakna setelah koreksi Holm. Keempat faktor berasosiasi dengan kunjungan rutin dalam sampel ini, tetapi temuan bersifat eksploratori. Edukasi yang melibatkan keluarga dan penguatan komunikasi kader dapat dipertimbangkan dan perlu dievaluasi pada studi yang lebih besar.

Kata kunci : dukungan keluarga; ibu balita; kunjungan posyandu; pengetahuan; peran kader

ABSTRACT

Posyandu is a hub for child growth monitoring within Indonesia's Primary Care Integration, but its benefit depends on regular attendance by mothers. This study analysed the association of knowledge, attitude, family support, and perceived cadre role with regular Posyandu attendance. A cross-sectional study was conducted in Kelurahan Talang Kelapa, Palembang City, in 2026 among 40 mothers of under-five children. Structured interview data were analysed using Fisher's exact test, crude odds ratios (OR), and prevalence ratios with 95% confidence intervals (CI). Overall, 67.5% of mothers attended regularly. Regular attendance was higher among mothers with good knowledge (83.3% vs 43.8%; OR 6.43; 95% CI 1.49–27.65), positive attitude (80.0% vs 46.7%; OR 4.57; 1.12–18.73), family support (80.8% vs 42.9%; OR 5.60; 1.33–23.62), and a good perceived cadre role (78.6% vs 41.7%; OR 5.13; 1.19–22.11). Confidence intervals were wide, and no p-value remained significant after Holm correction. All four factors were associated with regular attendance in this sample, but the findings are exploratory. Family-inclusive education and strengthened cadre communication may be considered and should be evaluated in larger studies.

Keywords: cadre role; family support; knowledge; mothers of under-five children; Posyandu attendance

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Introduction

Posyandu is a community-based health effort that brings basic services closer to mothers and toddlers, including weighing, measuring length or height, immunization, and nutrition education. In the transformation of Primary Health Service Integration (ILP) established in 2023, posyandu becomes a service hub at the village/urban village, hamlet, and community unit levels serving targets throughout the life cycle [1].

Institutionally, Minister of Home Affairs Regulation Number 13 of 2024 places posyandu as part of village/urban village community institutions that can serve six Minimum Service Standards [2]. This study does not assess the function of these institutions and is limited to maternal and toddler health services at posyandu.

Monthly growth monitoring at posyandu remains relevant because toddler nutrition issues have not been resolved. The national stunting prevalence was recorded at 21.5% in the 2023 Indonesian Health Survey (SKI) [3] and 19.8% in the 2024 Indonesian Nutrition Status Survey (SSGI) [4]. Routine visits provide an opportunity to detect growth failure earlier; for example, research in the Pringsurat Community Health Center area, Temanggung, found that poor utilization of posyandu was associated with the incidence of growth failure in toddlers [5]. The above stunting figures are presented as context. This study measures mothers' visits to posyandu, not children's nutritional status, so it does not assess the impact of posyandu on stunting.

The Andersen health service utilization behavior model divides determinants of utilization into predisposing, enabling factors, and needs [6]; this model is still widely used and continues to be developed in health service research [7]. Within this framework, mothers' knowledge and attitudes towards posyandu are placed as predisposing factors (health beliefs), while family support and the role of cadres are enabling factors at the family and community levels. These four variables were chosen because they are most frequently studied in the context of posyandu and can be changed through programs. The need component, for example mothers' perceptions of the child's health condition, is not measured because posyandu is a routine preventive service for all toddlers; the absence of this component is noted as a limitation. In this manuscript, the term determinant refers to the conceptual position within the model, while empirical findings are referred to as associated factors.

Research in Indonesia shows generally consistent results but is not always consistent. The relationship between knowledge and/or the role of cadres and toddler visits was reported in Tasikmalaya [8], in Magelang City with 91 respondents selected in a two-stage cluster [9], and in South Bengkulu with 66 respondents [10]. The relationship between family roles and cadres was reported in Karawang with 76 respondents [11], and the relationship between family support was reported in Sukabumi with 225 respondents selected randomly proportionally [12]. Conversely, research in West Jakarta defining good utilization as attendance at least four times within six months did not find a relationship between knowledge and cadre support with posyandu utilization, although attitude and family support were related [13]. In Samarinda, knowledge was associated with utilization but in the opposite direction, meaning inactive mothers actually had more good knowledge [14]. In North Aceh, attitudes toward the benefits of posyandu, satisfaction, and intention to visit are related to the frequency of mothers' participation [15]. Differences in the definition of visits, instruments, sampling methods, and regional context likely explain these inconsistencies, making clear operational definition reporting important.

At the provincial level, the weighted toddler coverage (D/S) in South Sumatra in 2024 was recorded at 91.7% [16]. The D/S indicator measures program coverage in a given month, while this study assesses the regularity of visits by each mother during a period; the two cannot be interchangeable. Talang Kelapa Village, Alang-Alang Lebar District, has several active posyandu. In addition to adding data from the Palembang urban area, this study reports the size of

associations along with their uncertainties to be compared with other studies.

This study aims to analyze the relationship between knowledge, attitude, family support, and mothers' perceptions of the role of cadres with routine posyandu visits by mothers of toddlers in Talang Kelapa Village, Palembang City.

Method

Design and location. This study is an observational analytic study with a cross-sectional design. The study was conducted in Talang Kelapa Village, Alang-Alang Lebar District, Palembang City, in 2026.

Population and sample. The target population consisted of mothers who have toddlers (0–59 months) and reside in Talang Kelapa Subdistrict. The sample consisted of 40 mothers of toddlers. Inclusion criteria were residing in the study area, having toddlers, and willing to participate by signing a written consent.

Variables and operational definitions. The dependent variable is routine posyandu visits based on mothers' reports, categorized as routine and non-routine. The non-routine category is not interpreted as not requiring services. The independent variables are (1) mothers' knowledge about posyandu (good/poor), (2) mothers' attitudes towards posyandu (positive/negative), (3) family support (supportive/not supporting), and (4) mothers' perceptions of the cadres' roles (good/poor). The role of cadres is measured as respondents' assessments, not as objective measures of cadre performance.

Instruments and data collection. Primary data were collected through interviews using structured questionnaires containing respondent characteristics, knowledge, attitudes, family support, cadre roles, and posyandu visits. All 40 respondents had complete data for all variables.

Data analysis. Univariate analysis presented frequency and percentage. Bivariate analysis used tables 2×2. The minimum expected frequency in the four tables was 5.20; 4,88; 4,55; and 3.90, so significance was tested consistently with the two-tailed Fisher's exact test ($\alpha = 0.05$) across all comparisons. The strength of association was expressed as a rough OR (unadjusted) with a 95% CI of the logit method (Woolf); less supportive categories were used as references. Because outcomes occurred frequently (67.5%), OR would be much greater than the proportion ratio; therefore, the prevalence ratio (RP) with 95% CI by the log method was also reported as a complementary measure [17]. The analysis was treated as exploratory. As a sensitivity analysis for multiple tests, the p-value was adjusted using the Holm method [18]. Multivariate analysis was not performed because only 13 respondents were irregular.

Research ethics. All respondents gave written consent before the interview.

Results and Discussion

Respondent characteristics. The majority of respondents were aged 30–39 years (42.5%) and worked as housewives (67.5%); half of respondents had a last education of high school or equivalent (50.0%) (Table 1). Age grouping was used only for description purposes and was not further analyzed.

Table 1. Respondent characteristics (n = 40)

Features	Category	n	%
Age	< 20 years old	2	5,0
	20–29 years old	15	37,5
	30–39 years old	17	42,5
	≥ 40 years old	6	15,0
Last education	High School/equivalent	20	50,0
	Besides high school or equivalent	20	50,0
Occupation	Housewife	27	67,5
	Entrepreneur	7	17,5
	Employees	4	10,0
	Others	2	5,0

Source: Primary data, 2026.

Distribution of research variables. As many as 27 out of 40 mothers (67.5%) visited regularly and 13 mothers (32.5%) did not. Most respondents had good knowledge (60.0%), had a positive attitude (62.5%), received family support (65.0%), and rated the role of cadres as good (70.0%) (Table 2). These figures reflect the research sample and cannot be considered as covering all mothers of toddlers in the urban village.

Table 2. Distribution of research variables

Variable	Category	n	%
Posyandu visit	Routine	27	67,5
	Not routine	13	32,5
Knowledge	Good	24	60,0
	Not good	16	40,0
Attitude	Positive	25	62,5
	Negative	15	37,5
Family support	Support	26	65,0
	Not supported	14	35,0
Perceptions of the role of cadres	Good	28	70,0
	Not good	12	30,0

Source: Primary data, 2026. Denominator of all variables = 40; no data lost.

Bivariate analysis. The proportion of routine visits was higher in the four more supportive groups (Table 3): good knowledge (83.3% vs 43.8%; p = 0.015), positive attitude (80.0% vs 46.7%; p = 0.041), family support (80.8% vs 42.9%; p = 0.031), and perception of cadre roles was good (78.6% vs 41.7%; p = 0.032). Crude OR ranged from 4.57–6.43 with a wide and overlapping 95% CI, so the OR size could not be used to rank factors. In the prevalence ratio scale, the proportion of routine visits in the more supportive group was about 1.7–1.9 times that of the reference group; The 95% CI for attitude (0.96–3.05) and perception of the cadres' role (0.94–3.79) included a figure of 1. After Holm adjustment, the p-value ranged from 0.061 to 0.094.

Table 3. The relationship between knowledge, attitude, family support, and perception of cadres' roles with routine posyandu visits (n = 40)

Variable	Category	Routine n (%)	Non-routine n (%)	Total	p	OR kasar (IK 95%)	RP (IK 95%)
Knowledge	Good	20 (83,3)	4 (16,7)	24	0,015	6,43 (1,49–27,65)	1,90 (1,06–3,41)
	Not good	7 (43,8)	9 (56,3)	16			
Attitude	Positive	20 (80,0)	5 (20,0)	25	0,041	4,57 (1,12–18,73)	1,71 (0,96–3,05)
	Negative	7 (46,7)	8 (53,3)	15			
Family support	Support	21 (80,8)	5 (19,2)	26	0,031	5,60 (1,33–23,62)	1,88 (1,00–3,55)
	Not supported	6 (42,9)	8 (57,1)	14			
Perceptions of the role of cadres	Good	22 (78,6)	6 (21,4)	28	0,032	5,13 (1,19–22,11)	1,89 (0,94–3,79)
	Not good	5 (41,7)	7 (58,3)	12			

Source: Primary data, 2026. p: two-tailed Fisher exact test; p after Holm adjustment: knowledge 0.061; attitude, family support, and cadre role perception 0.094. OR: rough *odds ratio* (unadjusted), 95% CI logit (Woolf) method. RP: routine visit prevalence ratio, 95% CI log method. Ref.: reference category. Percentages are calculated per row and rounded to one decimal so that the total can become 100.1%.

Knowledge and regular visits

Compared to mothers with poor knowledge, the odds of regular visits for mothers with good knowledge were 6.43 times higher (95% CI 1.49–27.65) in bivariate analysis; in proportional scales, routine visits were 83.3% versus 43.8% (RP 1.90). This finding aligns with studies in Tasikmalaya [8], Magelang City [9], and South Bengkulu [10]. However, the West Jakarta study did not find a relationship between knowledge and the utilization of posyandu [13], and the study in Samarinda found an inverse directed relationship [14]. These two studies differ from this study: the West Jakarta study used the minimum attendance criterion four times in six months and 92.5% of respondents had good knowledge, resulting in very small knowledge variations, while the Samarinda study used data from 2013 with the majority of inactive mothers. Therefore, the significant differences between studies cannot yet be interpreted as differences in relationships between regions.

One possible explanation is that mothers who understand the function of weighing and routine measurement are more likely to attend even if the child is not sick. However, 4 out of 24 well-informed mothers still do not visit regularly; other factors such as time, family support, or service experience may play a role but were not tested in this study. The opposite may also occur: mothers who regularly attend receive more information

from cadres and staff, thus their knowledge improves. The cross-sectional design cannot distinguish between the two possibilities.

Attitude and routine visits

The odds of regular visits for mothers with a positive attitude were 4.57 times higher than for mothers with a negative attitude (95% CI 1.12–18.73); the proportion was 80.0% versus 46.7% (RR 1.71; 95% CI 0.96–3.05). The lower limit of the RR CI below 1 indicates that this association is among the least certain. Theoretically, attitudes and beliefs about service benefits are predisposing factors in the Andersen model [6]. Research in North Aceh found that attitudes toward posyandu benefits are related to the frequency of mothers' participation [15], and similar findings were reported in West Jakarta [13]. Good service experiences may reinforce positive attitudes, but frequent visits can also shape these attitudes; this two-way relationship cannot be explained by cross-sectional designs.

Family support and regular visits

The odds of regular visits for mothers receiving family support were 5.60 times higher than for mothers without support (95% CI 1.33–23.62); the proportion was 80.8% versus 42.9% (RP 1.88; 95% CI 1.00–3.55). These findings align with studies in Sukabumi [12], Karawang [11], Magelang City [9], and West Jakarta [13]. Practical forms of support such as reminders of schedules, escort assistance, or division of household tasks can be mechanisms that facilitate mothers' attendance, but these mechanisms are not measured separately. The high proportion of housewives (67.5%) also cannot be used as a measure of caregiving burden. Because the providers of support are not analyzed separately, these findings are generally read as family support; husbands are one example of family members who can be involved, not the group proven to be the most decisive.

Perceptions of the role of cadres and routine visits

The odds of regular visits among mothers who rated the cadres' role as good were 5.13 times compared to mothers who rated it less well (95% CI 1.19–22.11); the proportion was 78.6% versus 41.7% (RP 1.89; 95% CI 0.94–3.79). The relationship between cadres' role and toddler visits was also reported in Tasikmalaya [8], Karawang [11], and Magelang City [9], and positive perceptions of cadre performance were associated with mothers' participation in Samarinda [14]; conversely, cadre support was not related to the utilization of posyandu in West Jakarta [13]. This variable is a mother's perception, not an objective measure of service quality or cadres' workload. Mothers who frequently attend have more opportunities to interact with cadres, so they can assess cadres more positively; the direction of this relationship may need to be considered. The implementation of ILP expands the posyandu targets throughout the entire life cycle [1], so the role of cadres in reminding schedules and following up on absent mothers remains relevant, although the effectiveness of this step was not tested in this study.

Implications

The four variables represent the individual, family, and community-based service levels. This study did not test interaction, mediation, or intervention effectiveness, so it cannot be concluded that the four factors work together or that a single intervention is less effective. As a consideration for the program, education on the benefits of growth monitoring involving mothers and family members, as well as strengthening cadre communication, can be piloted and evaluated together with community health centers.

Limitations

First, the sample was small (n = 40; 13 not routine) so estimates were less precise, the CI was wide, and multivariate analysis was not feasible. Second, the cross-sectional design could not ensure the timing sequence and direction of the relationship. Third, OR and RP had not been adjusted for potential confounding factors such as education, occupation, toddler age, number of children, and distance or access to posyandu. Fourth, four tests were conducted simultaneously and no p-value remained < 0.05 after Holm adjustment, so the findings needed to be confirmed. Fifth, visits and cadre roles were measured from mothers' reports without

verification with the MCH book or posyandu register, making them vulnerable to memory bias and tendencies to give answers considered good. Sixth, exposure and outcomes were reported by the same respondents at the same time, which potentially caused bias in the shared method [19]. Seventh, mothers who rarely or never attend posyandu have the potential to be underrepresented, so the proportion of routine visits may be too high. Eighth, instrument details (items, cut-off points, as well as validity and reliability tests) are not reported, so measurement replication is limited. The generalization of results is limited to mothers with similar characteristics in the study area.

Conclusion

Among 40 mothers of toddlers in Talang Kelapa Subdistrict, Palembang City, bivariate analysis showed that good knowledge, positive attitudes, family support, and good perception of the cadres' role were associated with regular posyandu visits. This association is rough, the estimates are imprecise, and do not persist after multiple test adjustments, so they should be read as exploratory findings, not as evidence of cause-and-effect or independent relationships. As many as 32.5% of mothers in the sample had not visited regularly.

Community health centers and cadres can utilize the posyandu register or MCH book to identify absent mothers and follow up on them, for example through schedule reminders or home visits, if the procedure is feasible to implement. Education about the benefits of growth monitoring can be directed to both mothers and family members. Evaluation indicators and implementation schedules should be established together with the program manager. Further research is recommended using a larger probability sample, verification of visits from the posyandu register, and regression models that produce corrected prevalence ratios.

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