



ANALYSIS OF FACTORS INFLUENCING CADRE PERFORMANCE IN PROVIDING HEALTH SERVICES AT POSYANDU FOR MOTHERS AND TODDLERS

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ABSTRACT

Posyandu serves as a crucial frontline service for maternal and child health. Although child growth monitoring and nutrition recording in Gorontalo Province have reached 100% coverage, the quality of Posyandu cadre performance still varies. Understanding the factors that influence cadre performance is essential for improving service quality, especially among cadres without health-related educational backgrounds. This study aimed to analyze the factors associated with cadre performance in providing maternal and child health services at Posyandu. This study employed an observational analytic design with a cross-sectional approach. A total of 100 Posyandu cadres each with a non-health educational background were included using a total sampling technique. Data were collected using structured questionnaires that had undergone validity and reliability testing prior to use. The analysis examined the influence of training, motivation, health center support, and community involvement on cadre performance. The findings showed that training had a significant effect on cadre performance ($p = 0.029$; $R^2 = 0.048$), as did motivation ($p = 0.009$; $R^2 = 0.068$). Health center support was not significantly associated with performance ($p = 0.814$; $R^2 = 0.001$). Community involvement was identified as the most influential factor ($p = 0.006$; $R^2 = 0.075$). Cadre performance at Posyandu is strongly influenced by motivation and community involvement, while training remains essential for enhancing the competence of cadres with non-health educational backgrounds. Strengthening these key factors can help improve the quality of maternal and child health services at the community level.

Keywords: cadre performance; community involvement; motivation; posyandu; training

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INTRODUCTION

Posyandu is a community-based health service system designed primarily to improve the health of pregnant women and young children through a range of basic health programs. Services provided at Posyandu include antenatal care, immunization, monitoring of child growth and development, and education on nutrition and health. As a key component of Indonesia's health service structure, Posyandu plays a strategic role in ensuring that essential health services are accessible, particularly in remote areas. The success of Posyandu is highly dependent on the competence and performance of its cadres, who serve as the frontline workers responsible for implementing programs at the community level (Sudrajad et al., 2022).

According to the Indonesian Ministry of Health (2023), there are approximately 280,000 active Posyandu units across the country, supported by more than 1.5 million cadres who serve as the backbone of maternal and child health services. Their role is especially critical considering that national stunting prevalence reached 21.5% in 2022 (SSGI), underscoring the need to strengthen basic health services through Posyandu. National studies have shown that factors such as knowledge, motivation, training, attitudes, infrastructure, and environmental support significantly influence cadre performance; for instance, a study conducted in Semarang (2024) reported that these factors accounted for 89.3% of the variance in cadre performance. In Gorontalo Province, cadres also play a vital role, as reflected in the region's achievement as the highest-performing province in Indonesia for child growth monitoring in 2024 an accomplishment supported by highly

active Posyandu units. The province currently has more than 3,200 Posyandu, with many cadres having received basic competency training from the local Health Office. These data illustrate that improving cadre performance is not only a local priority but also a critical element of Indonesia's national strategy to strengthen primary health care and reduce stunting rates.

In 2024, Gorontalo Province successfully achieved 100% coverage in community-based nutrition monitoring and reporting (e-PPGBM) across all Posyandu within the region (Gorontalo Health Office, 2024). Despite this encouraging administrative achievement, challenges remain regarding the quality of services provided by cadres on the ground. Although community participation in Posyandu activities has increased, significant obstacles persist in optimizing cadre performance. Cadre performance plays a crucial role in the success of Posyandu programs because cadres are directly involved in delivering services to pregnant women and children (Pratama & Dewi, 2020).

The Indonesian Nutrition Status Survey (SSGI) 2022 reported a national stunting prevalence of 21.5%, indicating that Posyandu services may not yet be fully optimized. Studies from various regions highlight recurring challenges such as insufficient knowledge and technical skills, low motivation due to limited incentives, and inadequate Posyandu infrastructure. Similar issues are found in Gorontalo; although the province recorded the highest child growth monitoring achievement in Indonesia in 2024, the local Health Office emphasized the need for continuous training and improved incentives to support cadre performance. In the working area of the Gorontalo City Health Center, performance issues include cadre inactivity, inconsistent reporting, and uneven competency in providing health education to mothers of young children. These issues demonstrate the need for targeted efforts to improve cadre performance through both individual factors—such as knowledge, attitudes, and motivation and external supports such as training, facilities, and recognition, to ensure optimal maternal and child health services.

A decline in the quality of Posyandu services can negatively affect the health outcomes of pregnant women and young children. Therefore, analyzing the factors that influence cadre performance is essential to developing appropriate solutions for the challenges faced. This study aimed to analyze the factors associated with cadre performance in providing maternal and child health services at Posyandu. A quantitative approach is used to measure the influence of variables such as training, motivation, health center support, community participation, and facility availability on cadre performance (Wahyuningsih & Suyanto, 2022). Thus, this research examines how educational background, training, motivation, health center support, and community involvement affect Posyandu cadre performance, as well as identifying the most dominant factor. The findings are expected to contribute to evidence-based policy improvements in cadre empowerment and the enhancement of community health service quality.

METHOD

This study employed a quantitative approach with an analytical observational design using a cross-sectional method. The research was conducted within the working area of the Gorontalo City Health Centers. The study population consisted of 100 Posyandu cadres distributed across 10 health centers. A total sampling technique was applied, in which all active cadres with at least one year of experience were included as respondents. Data were collected using a structured questionnaire with Likert-scale response options. Data were collected using a structured questionnaire with Likert-scale response options. Prior to data collection, the questionnaire underwent validity testing using item-total correlation, where items with $r\text{-count} > r\text{-table}$ ($p < 0.05$) were considered valid. Reliability testing was performed using Cronbach's Alpha, and all constructs produced coefficients ≥ 0.70 , indicating acceptable internal consistency and reliable measurement of the assessed variables. The data analysis consisted of univariate analysis to describe variable distributions, bivariate analysis using simple linear regression, and multivariate analysis using multiple linear regression to identify the factors that most strongly influenced cadre performance.

RESULT

Table 1.
Distribution of Respondents by Characteristics

Characteristics		f	%
Age	18-25	2	2.0
	26-35	14	14.0
	36-45	27	27.0
	46 year and above	57	57.0
Gender	Man	0	0
	Woman	100	100.0
Final Education	Elementary/Junior High School	20	20.0
	High School/Vocational School	80	80.0
Long Time as a Cadre	< 1 year	15	15.0
	1-3 year	13	13.0
	4-6 year	19	19.0
	>6 year	53	53.0
Cadre Education Background	Health	0	0
	Non Health	100	100.0
Cadre Training	Less	37	37.0
	Enough	63	63.0
Cadre Motivation	Less	36	36.0
	Enough	64	64.0
Puskesmas Support	Enough	8	8.0
	Good	92	92.0
Community Engagement	Less	18	18.0
	Enough	82	82.0
Cadre Performance	Less	25	25.0
	Enough	71	71.0
	Good	4	4.0

Based on table 1. The distribution of respondents based on the age group of 100 respondents was found that the age of the respondents who dominated was the age group of 46 years and above as many as 57 respondents while the least was the age group of 18-25, which was as many as 2 respondents (2%). The distribution of respondents based on gender from 100 respondents, it was found that all respondents in this study were female, namely as many as 100 respondents (100%) while the male gender was 0 respondents (0%). The distribution of respondents based on the last education showed that out of 100 respondents, the last education of high school/vocational school was 80 respondents (80%), while the last education of elementary/junior high school was 20 respondents (20%). The distribution of respondents based on the length of time they have been a cadre shows that out of 100 respondents, >6 years of work is the most dominant, namely 53 respondents (53%). Meanwhile, the minimum length of work is 1-3 years, which is as many as 13 respondents (13%).

The distribution of respondents based on educational background carried out on the cadres of the Health Service of the Posyandu Ibu Toddler in the Working Area of the Gorontalo City Health Center showed that out of 100 respondents, respondents with a health background were 0 respondents (0%), while respondents with non-health backgrounds were 100 respondents (100%). The distribution of respondents based on Cadre Training conducted on the cadres of the Health Service of the Posyandu Ibu Toddler in the Gorontalo City Health Center Working Area showed that out of 100 respondents, respondents who had criteria were less than 37 respondents (37%), while respondents who had sufficient criteria were 63 respondents (63%). The distribution of respondents based on Cadre Motivation carried out on the cadres of the Health Service of the Posyandu Ibu Toddler in the Work Area of the Gorontalo City Health Center showed that out of 100 respondents, respondents who had insufficient criteria were 36 respondents (36%), while respondents who had

sufficient criteria were 64 respondents (64%). The distribution of respondents based on Puskesmas Support shows that out of 100 respondents, 8 respondents (8%) have sufficient criteria, while 92 respondents (92%) have good criteria. The distribution of respondents based on Community Involvement carried out on the Health Service cadre of the Posyandu Ibu Toddler in the Gorontalo City Health Center Working Area showed that out of 100 respondents, respondents who had insufficient criteria were 18 respondents (18%), while respondents who had sufficient criteria were 82 respondents (82%). The distribution of respondents based on Cadre Performance carried out on the cadres of the Health Service of the Posyandu Ibu Toddler in the Gorontalo City Health Center Working Area showed that out of 100 respondents, respondents who had insufficient criteria were 25 respondents (25%), while respondents who had sufficient criteria were 71 respondents (71%).

Table 2.
The Influence of Research Variables on Cadre Performance

Variabel	R	R Square	sig.
<i>Cadre Training*Cadre Performance</i>	0,218	0,048	0,029
<i>Cadre Motivation*Cadre Performance</i>	0,260	0,068	0,009
<i>Puskesmas Support*Cadre Performance</i>	0,024	0,001	0,814
<i>Community Engagement*Cadre Performance</i>	0,274	0,075	0,006

Based on the results of the statistical test in table 2. A value was obtained (sig.= 0.029 ; R = 0.219; R Square = 0.048) means that the effect of cadre training on cadre performance in the work area of the Gorontalo City Health Center is in the low category with a contribution of 4.8% to the change in cadre performance. A value (sig.= 0.009 ; R = 0.260; R Square = 0.068) means that the influence of cadre motivation on cadre performance in the work area of the Gorontalo City Health Center is in the low category with a contribution of 6.8%. A score (sig.= 0.814 ; R = 0.024; R Square = 0.001) means that the influence of puskesmas support on the performance of cadres in the work area of the Gorontalo City Health Center is in the very weak category with a contribution of 0.001%. A value (sig.= 0.006 ; R = 0.274; R Square = 0.075) means that the influence of community involvement on the performance of cadres in the work area of the Gorontalo City Health Center is in the medium category with a contribution of 7.5%.

Table 3.
The most influential variable on the Performance of Cadres

Variabel	T	sig.
<i>Cadre Training (X₁)</i>	-.782	0,436
<i>Cadre Motivation (X₂)</i>	1.333	0,186
<i>Health Center Support (X₃)</i>	0.278	0,781
<i>Community Engagement (X₄)</i>	1.988	0.050

Based on the results of the statistical test in table 3. It can be seen that the variable that has the most influence on Cadre Performance in the Gorontalo City Health Center Area is the Community Involvement variable because a score (sig.= 0.050) is obtained, followed by the Cadre Motivation variable (sig.= 0.186), the Cadre Training variable (sig.= 0.436), while for the Puskesmas Support variable the value (sig.= 0.781), while for the format variable the value (sig.= 0.920) does not have a significant effect on the performance of cadres.

DISCUSSION

Educational Background of Posyandu Cadres in Maternal and Child Health Services

The findings of this study show that all Posyandu cadres had non-health educational backgrounds (100%; n=100), with none having formal health-related education (0%; n=0). This reflects a community-based recruitment pattern in which cadres are drawn from local residents rather than trained health professionals. Such an approach carries dual implications: while cadres' social and cultural proximity to the community strengthens health promotion and communication, the absence of formal health education may create gaps in technical competencies that require structured training and continuous supervision. Methodologically, the homogeneity of educational background

limits its usefulness as a comparative variable; programmatically, it underscores the need for consistent capacity-building strategies to ensure cadres meet expected performance standards.

These results align with the study by Rokhamah, Setyowati, Sayuti, and Qotimah (2025) in Wonorejo Village, Malang, which reported that most Posyandu cadres had only primary to secondary education, with none attaining higher education. Their findings also showed a significant relationship between educational level and cadre attitudes toward Posyandu implementation, indicating that education contributes to readiness for field responsibilities. Consistency is also evident in the work of Chabibah and Agustina (2023), which emphasized the importance of routine training and coaching in enhancing communication skills, knowledge, and practices related to stunting prevention. Similarly, Widyastuti Wahyuningsih (2021) highlighted the central role of cadre knowledge in sustaining Posyandu activities, reinforcing the importance of ongoing mentorship.

At the international level, WHO guidelines define community health workers (CHWs) as lay members of the community who undergo short-term training rather than professional health education. The guidelines recommend appropriate selection criteria, minimum educational requirements aligned with job demands, continuous training, supervision, and integration within primary care systems. These principles affirm that the absence of formal health education among cadres is not a deviation but an inherent feature of community-based models—one that must be balanced with systemic investments in upskilling. In the current Indonesian context, the need for competence is further articulated into 25 essential Posyandu skills, reinforcing that structured training is indispensable for ensuring effective cadre performance despite their non-health educational backgrounds.

Effect of Cadre Training on Cadre Performance in Posyandu Maternal and Child Health Services

Statistical analysis revealed that cadre training had a significant effect on cadre performance in the Gorontalo City Health Center area. Although the correlation coefficient was relatively low ($R = 0.218$), it still indicates a positive relationship: better training is associated with better performance. However, the contribution of training to performance was small, with an R^2 of 0.048, meaning that training accounted for only 4.8% of the performance variability. This suggests that while training is important, numerous other factors also influence cadre performance. Nevertheless, the significant p -value ($0.029 < 0.05$) confirms that training plays a meaningful role in improving performance, even if its contribution is limited.

These findings are consistent with recent Indonesian studies. Handayani and Nuryani (2022) reported that trained cadres in Wonogiri were significantly more likely to perform well than those who had never received training, with Fisher's Exact Test yielding $p = 0.002$. Similarly, Nurlaili and Pertiwi (2025) found that 96.3% of trained cadres performed well, compared to only 33.3% of untrained cadres ($p < 0.001$). These studies reinforce that training directly enhances competencies and performance outcomes in community health settings. In the Gorontalo field context, although training had a significant effect, its relatively small contribution suggests that existing training may be limited in depth, frequency, or relevance. Thus, while training is necessary, it is not sufficient to produce substantial improvements without complementary factors such as supervision, motivation, and community support.

Effect of Cadre Motivation on Cadre Performance

The results indicate that cadre motivation significantly influences cadre performance in the Gorontalo City Health Center area. The correlation coefficient ($R = 0.260$) reflects a positive but modest relationship. Motivation accounted for 6.8% of performance variability ($R^2 = 0.068$), suggesting that while motivated cadres tend to perform better, many other factors also shape their

performance. Still, the p-value ($0.009 < 0.05$) demonstrates that motivation is a statistically significant predictor of performance. These findings are supported by research from Setiyawan, Wardani, and Abiddin (2025) in Blitar, which found a significant relationship between motivation and cadre performance in elderly Posyandu services ($p = 0.006$). When combined with communication and incentives, motivation produced even stronger performance outcomes. Similarly, studies by Ita, Kosasih, and Utoyo (2024) showed that motivation—alongside knowledge, training, and attitudes—significantly influenced cadre performance in stunting prevention programs. Sodikin (2024) also emphasized that motivation works best when supported by conducive work environments and adequate training. In the Gorontalo context, motivation—such as recognition, encouragement, or emotional support—helps improve performance, although its contribution remains smaller than factors like community involvement. This resembles the findings of Yusriani and Dewi (2024), who observed that intrinsic motivation plays a stronger role than extrinsic motivation among health workers, emphasizing that motivation alone is insufficient without supportive systemic conditions.

Effect of Health Center Support on Cadre Performance

The analysis showed that health center support did not significantly affect cadre performance. The correlation coefficient was extremely low ($R = 0.024$), and the contribution to performance was negligible ($R^2 = 0.001$), indicating that only 0.1% of performance variance could be explained by this variable. The p-value (0.814) confirms the lack of statistical significance. This pattern aligns with recent Indonesian literature suggesting that individual and capacity-related factors—such as knowledge, attitudes, motivation, and training—play a stronger role in influencing cadre performance than relatively uniform institutional support. Studies published in JMKI (2024), for example, highlight the dominance of predisposing, enabling, and reinforcing factors at the cadre level. In Gorontalo, these results imply a gap between formal support provided by health centers—such as administrative guidance or facilities—and the actual needs or experiences of cadres in the field. This discrepancy may explain why performance varies independently of institutional support.

Effect of Community Involvement on Cadre Performance

The findings demonstrate that community involvement significantly influences cadre performance. With $R = 0.274$ and $R^2 = 0.075$, community involvement explains about 7.5% of the variation in performance—making it the strongest predictor among all tested variables. The p-value of 0.006 confirms the significance of this effect. Although the contribution is modest, the positive association suggests that when communities actively participate—through attendance at Posyandu events, support for cadre activities, or engagement in preventive health programs—cadres perform better. These results echo those of Siswati, Olfah, Attawet, Nurhidayat, and Waris (2025), who found that cadre readiness for Integrated Primary Services (ILP) in DIY was boosted by strong community participation and support. When community involvement is high, cadres find it easier to apply their skills, maintain consistent service delivery, and achieve program targets. In Gorontalo, active community involvement clearly enhances cadre performance, demonstrating that community engagement is an essential—though often overlooked—component of Posyandu effectiveness.

The Most Influential Variable Affecting Cadre Performance

Based on multivariate analysis, community involvement (X4) emerged as the most influential variable affecting cadre performance in the Gorontalo City Health Center area. The t-value of 1.988 with a significance level of 0.050 indicates that its effect is statistically significant, though marginal. This shows that community participation provides both practical and moral support that strengthens cadre performance, even though its quantitative contribution remains moderate. In contrast, training (X1), motivation (X2), and health center support (X3) did not show significant effects on performance in the multivariate model. This may indicate overlap among predictors or that community involvement acts as a mediating factor that enables other variables to become effective.

These results are consistent with studies in Puskesmas Anak Air (Padang), which reported that community context often amplifies the impact of individual factors such as knowledge, motivation, or training. In the Gorontalo context, community involvement functions as the primary driver that enhances cadre responsiveness, confidence, and service consistency. This reinforces the principle that successful community-based health programs rely not only on institutional structures but also on the active participation of local residents.

CONCLUSION

Based on the findings of this study, it can be concluded that several variables significantly influence the performance of community health volunteers (kader) in the working area of Puskesmas Kota Gorontalo. Educational background, cadre training, cadre motivation, and cadre involvement were all shown to have a positive effect on performance. In contrast, support from the Puskesmas did not demonstrate a significant impact on cadre performance. Among all the variables analyzed, community involvement emerged as the most influential factor in determining cadre performance in the Puskesmas Kota Gorontalo area.

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