

Factors Influencing the Performance of Health Workers at Pattingalloan Community Health Center, Pinrang Regency

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ABSTRACT: This study aims to analyze how leadership, motivation, and discipline influence the performance of healthcare workers at Puskesmas Pattingalloan, Kabupaten Pinrang, Indonesia. Workforce performance is a key determinant of service quality, especially in rural and resource-limited contexts. Using a quantitative cross sectional design, data were collected from 98 health workers through validated Likert scale questionnaires and analyzed using chi square tests and ordinal logistic regression. The results show that leadership, motivation, and discipline significantly affect performance. Participative and communicative leadership styles were strongly linked to higher productivity and staff commitment. Health workers with high levels of intrinsic and extrinsic motivation were notably more consistent and effective in service delivery. Likewise, strong adherence to disciplinary standards, including punctuality and professional responsibility, correlated with improved performance and patient satisfaction. These findings reinforce existing theories on transformational leadership and motivational dynamics, especially within decentralized healthcare systems. This study offers valuable policy implications for strengthening human resource management at the primary care level. Integrating leadership development, sustainable motivation programs, and supportive disciplinary frameworks can foster a culture of accountability and efficiency. The insights generated contribute to the global discourse on healthcare workforce optimization and provide direction for future empirical studies.

Keywords: Healthcare Performance, Participative Leadership, Health Worker Motivation, Workforce Discipline, Primary Care, Rural Health Services, Human Resource Management.



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INTRODUCTION

Healthcare workers are the foundation of any health system, and their performance determines service quality. In Indonesia, particularly at rural Puskesmas such as Pattingalloan in Pinrang, the

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distribution and effectiveness of staff remain uneven and pose serious challenges for health service delivery (Niedar et al., 2022; Zhu et al., 2019).

This disparity is emblematic of broader regional challenges across Southeast Asia, where rural health systems often struggle to attract and retain qualified healthcare personnel (Obamiro et al., 2022; Siega-Sur et al., 2017). Indonesia exemplifies these challenges: although over half a million healthcare professionals are deployed across the country, a disproportionate concentration is found in urban regions, leaving remote areas critically underserved (Dinas Kesehatan Provinsi Sulawesi Selatan, 2023). In South Sulawesi Province, for example, over 62,000 healthcare workers are concentrated in urban centers, while districts like Pinrang especially the Pattingalloan sub-region suffer from insufficient staffing levels and substandard service coverage (Dinas Kesehatan Provinsi Sulawesi Selatan, 2023). This mismatch contributes to declining service quality, prolonged patient wait times, and lower performance on essential indicators such as immunization coverage and antenatal care visits.

At Puskesmas Pattingalloan, the staffing situation is compounded by additional challenges including low staff morale, administrative burdens, and irregular attendance. Internal monitoring reports from 2023 highlight that on average, 14% of staff were absent without explanation each month, peaking during transitional periods like April and October. Such high absenteeism not only disrupts clinical services but also directly impacts patient satisfaction and health outcomes. These issues reflect broader workforce inefficiencies that require urgent management interventions ((Hatcher et al., 2014; Lim et al., 2017). Interviews with local administrators suggest that staff often struggle to balance clinical duties with excessive administrative tasks, further eroding their capacity to provide timely and effective care. This points to the urgent need for organizational strategies that improve leadership effectiveness, staff motivation, and compliance with professional duties.

In response, numerous policies and interventions have been proposed to address chronic workforce challenges, particularly in underserved rural settings. While financial incentives such as attendance bonuses and penalties for absenteeism have been employed, their long-term efficacy remains inconclusive (Jessup et al., 2021; Mesa et al., 2023). Community-engagement strategies that emphasize social accountability have gained traction, aiming to root health workers more firmly in the communities they serve (Behera et al., 2017; Yaya et al., 2018). However, such measures require sustained support and often falter in the absence of strong organizational leadership and consistent supervision. Therefore, to address systemic workforce issues holistically, research and practice must examine not just policy frameworks but also the micro-level organizational factors that influence worker behavior.

Among these organizational factors, leadership has emerged as a crucial determinant of staff performance and institutional climate. Transformational leadership styles, which emphasize vision, encouragement, and personal development, have been associated with increased motivation and job satisfaction among healthcare professionals (Cosgrave et al., 2019; Morris et al., 2023). In contrast, transactional leadership focuses on clearly defined roles, supervision, and contingent rewards, offering structure and clarity but potentially lacking in emotional engagement and long-term commitment (Li et al., 2021). Participative leadership, a hybrid approach that involves staff

in decision-making processes, is increasingly advocated in the public health domain for fostering ownership and accountability (Oo et al., 2023; Taylor et al., 2020). These leadership paradigms offer practical models for guiding health workers, particularly in settings with resource constraints and complex service needs.

Motivation is another key performance driver, especially in healthcare settings where physical and emotional demands are high. Theoretical distinctions between intrinsic and extrinsic motivation help clarify how different incentives affect work behavior. Intrinsic motivation derives from internal sources such as pride in work, ethical commitment, and professional autonomy (Nguyen et al., 2017; Zhao et al., 2019). Extrinsic motivation, on the other hand, stems from external rewards such as salary, promotion, and public recognition. While both types of motivation are necessary, reliance on extrinsic motivators alone often results in temporary performance gains rather than sustained engagement (Gwynne & Lincoln, 2017; Marme, 2021). In rural Indonesian settings, the balance between these two forms of motivation is critical, as health workers often operate under difficult conditions with limited access to professional development opportunities and material rewards (Liu et al., 2023).

Discipline, defined as consistent adherence to rules, schedules, and clinical standards, is the third organizational determinant under scrutiny. High disciplinary standards ensure not only individual accountability but also system reliability, both of which are essential for patient safety and satisfaction. However, discipline is frequently undermined by organizational culture, lack of supervision, and inadequate infrastructure (Amin et al., 2020; Frazee et al., 2022). In Puskesmas settings, particularly those in remote areas like Pattingalloan, weak managerial structures and high turnover rates have contributed to inconsistent rule enforcement and professional lapses (Godwin et al., 2014; Onnis, 2016). Addressing these challenges requires a multifaceted approach that integrates leadership training, infrastructural support, and a culture of accountability into health system governance (Gage et al., 2018; Mesa et al., 2023).

Recent literature has attempted to address these interlinked dimensions through empirical and theoretical models. For example, Brún et al. (2020) propose that leadership, motivation, and discipline do not function independently but rather interact in a synergistic manner to shape team performance. Wang et al. (2014) demonstrate that participative leadership styles promote both motivation and discipline by involving staff in goal-setting and evaluation processes. Likewise, Sfantou et al. (2017) argue that effective leadership establishes a normative framework within which motivated, disciplined performance becomes the default organizational behavior. These insights are particularly relevant in low-resource contexts, where efficient use of limited human capital is imperative. However, despite the growing evidence base, localized empirical studies from Indonesia's rural primary care settings remain sparse, limiting our understanding of how these variables manifest and interact in specific community health environments.

The present study seeks to fill this gap by empirically examining the impact of leadership, motivation, and discipline on the performance of healthcare workers at Puskesmas Pattingalloan, Kabupaten Pinrang. This location exemplifies the challenges faced by rural health systems in Indonesia, including human resource shortages, administrative inefficiencies, and variable service

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quality. By using a structured quantitative approach and analyzing relationships among the three key organizational variables, this study aims to provide actionable insights for health administrators and policymakers. The novelty of this study lies in its integrated approach to workforce performance, combining three critical behavioral determinants within a single analytical framework. Moreover, its focus on a rural Puskesmas offers context-specific evidence that can inform broader strategies for primary healthcare improvement in similar settings across Indonesia and beyond.

METHOD

This study used a cross-sectional analytical survey to assess the relationship between leadership, motivation, and work discipline with the performance of health workers at Puskesmas Pattingalloan.

The research was conducted at Puskesmas Pattingalloan, located in Patampanua District, Pinrang Regency, South Sulawesi Province. The study was carried out over a four month period, from May to August 2024.

The study population comprised all health workers assigned to the operational area of Puskesmas Pattingalloan, totaling 98 individuals. These included nurses, midwives, nutritionists, pharmaceutical staff, laboratory analysts, health promotion personnel, general practitioners, and health administration staff. A total sampling technique was used, meaning that every member of the population was included as a respondent.

Primary data were obtained via the distribution of closed ended questionnaires that had been previously tested for validity and reliability. Secondary data were drawn from internal Puskesmas documents, employee attendance reports, and the 2023 Health Profile of Pinrang Regency.

The independent variables in this study included:

- Leadership of the community health center head
- Work motivation of health workers
- Work discipline of health workers

The dependent variable was:

- Health worker performance

The primary instrument used was a Likert scale questionnaire ranging from 1 (strongly disagree) to 4 (strongly agree). The questionnaire was structured to assess the following indicators:

- Leadership: direction, communication, participation, and leadership style
- Motivation: intrinsic and extrinsic motivation

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- Discipline: punctuality, compliance with regulations, and job responsibility
- Performance: productivity, efficiency, and quality of service delivery

Data analysis was conducted using SPSS version 25 with univariate, chi-square bivariate, and ordinal logistic regression tests ($\alpha = 0.05$).

RESULT AND DISCUSSION

This study aimed to examine the effects of leadership, motivation, and discipline on the performance of health workers at Puskesmas Pattingalloan, Kabupaten Pinrang, in 2024. Using a cross sectional analytic survey approach with 98 respondents and employing chi square and ordinal regression analysis, the study yielded statistically significant findings across all three independent variables. These findings align with prior literature that emphasizes the role of participative leadership, motivational drivers, and disciplinary adherence in shaping health worker outcomes.

The analysis began with an assessment of the influence of leadership. Table 1 presents the cross tabulation and statistical results showing the relationship between leadership and health worker performance. The chi square test yielded a p value of 0.003, indicating a significant relationship between perceived leadership quality and performance levels. Furthermore, the ordinal regression analysis supported this result, showing a p value of 0.004, confirming leadership as a significant predictor of health worker performance.

Table 1. Relationship between Leadership and Health Worker Performance

Leadership	Satisfactory Performance	Poor Performance	Total	Chi-square Test	Ordinal Regression
Adequate	68 (85.0%)	12 (15.0%)	80	0.003	0.004
Poor	8 (44.4%)	10 (55.6%)	18		
Total	76 (77.6%)	22 (22.4%)	98		

The descriptive data reveal that 85% of respondents who rated the leadership as "adequate" also demonstrated a satisfactory level of performance, compared to only 44.4% of those who rated leadership as "poor." This finding is consistent with Yoo & Kim (2020) and Argüelles et al. (2021), who found that participative and communicative leadership positively correlates with staff satisfaction and performance. These results suggest that leaders who are able to involve staff in decision making, communicate effectively, and foster a sense of belonging can substantially enhance the efficiency and quality of healthcare delivery. The observed leadership effects also echo findings from Gilson et al. (2014) and Leeuwen et al. (2019), where leadership development interventions led to improved service delivery outcomes in comparable primary care settings.

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Moving to the dimension of motivation, Table 2 illustrates the relationship between motivation and health worker performance. The chi square and ordinal regression tests both returned significant values ($p = 0.002$), reinforcing the hypothesis that both intrinsic and extrinsic motivation are critical to performance outcomes.

Table 2. Relationship between Motivation and Health Worker Performance

Work Discipline	Satisfactory Performance	Poor Performance	Total	Chi-square Test	Ordinal Regression
Adequate	70 (84.3%)	13 (15.7%)	83	0.002	0.002
Poor	6 (40.0%)	9 (60.0%)	15		
Total	76 (77.6%)	22 (22.4%)	98		

In detail, 84.3% of respondents who reported high motivation levels achieved satisfactory performance, in contrast to only 40% among those with low motivation. This trend confirms insights from Serra & Soria (2022) and Bosold et al. (2023), who noted that health workers with intrinsic motivators such as personal fulfillment and service commitment combined with extrinsic rewards like incentives and recognition, are more likely to exhibit high levels of performance. Furthermore, the consistency of motivational influence across both statistical tests emphasizes its robustness as a key determinant of productivity. Previous studies by Finnegan et al. (2023) and Islam et al. (2017) also support the conclusion that motivational interventions, particularly in rural and resource limited contexts, can substantially enhance service delivery.

The third variable examined was discipline, with results summarized in Table 3. As with the other variables, both chi square ($p = 0.001$) and ordinal regression ($p = 0.007$) analyses confirmed a significant association between work discipline and health worker performance.

Table 3. Relationship between Work Discipline and Health Worker Performance

Work Discipline	Satisfactory Performance	Poor Performance	Total	Chi-square Test	Ordinal Regression
Adequate	69 (86.3%)	11 (13.7%)	80	0.001	0.007
Poor	7 (38.9%)	11 (61.1%)	18		
Total	76 (77.6%)	22 (22.4%)	98		

The data reveal that 86.3% of health workers with high levels of discipline reported satisfactory performance, while only 38.9% of those with poor discipline did so. These results affirm the theoretical basis that discipline, defined by punctuality, adherence to regulations, and responsibility, plays a crucial role in sustaining service quality in healthcare settings. Gruber et al.

(2021) and Witt et al. (2017) similarly noted that organizational mechanisms such as clear attendance policies, consistent enforcement, and performance audits are vital in fostering a culture of accountability. Moreover, the findings support the view that supportive rather than punitive disciplinary systems as recommended by Baxter et al. (2015) and Yaghoubi et al. (2022) are more effective in long term performance enhancement.

Together, the results from these three dimensions provide compelling empirical evidence that leadership, motivation, and discipline are interrelated factors that collectively determine the performance of health workers. This triadic model is particularly crucial in the context of rural healthcare settings like Puskesmas Pattingalloan, where organizational support and human resource management are often constrained by systemic and geographic limitations. Reinforcing leadership capacities, designing sustainable motivational schemes, and cultivating a consistent disciplinary framework are therefore essential strategies for improving the quality and responsiveness of healthcare services.

These findings contribute to the broader literature on primary healthcare management, particularly in decentralized health systems such as Indonesia's, where facility level leadership and human resources play a pivotal role in achieving public health objectives. Future research may consider exploring the moderating effects of variables such as training access, work life balance, and organizational climate in further detailing the pathways through which leadership, motivation, and discipline affect performance.

This study explored how leadership, motivation, and discipline influence workforce performance. Beyond confirming statistical significance, the findings highlight practical mechanisms through which these factors operate in the rural Puskesmas context. The results from the chi square and ordinal regression analyses demonstrate that all three variables significantly affect workforce performance. In interpreting these findings, it is essential to place them within broader theoretical frameworks and to compare them with international empirical evidence to derive contextual relevance and implications for policy and practice.

The significant association between leadership and health worker performance supports existing theories of transformational and participative leadership. As evidenced by (Brún et al., 2020), transformational leaders who articulate a compelling vision and foster empowerment can motivate healthcare staff to exceed basic performance expectations. In the context of Puskesmas Pattingalloan, where health workers operate in challenging rural environments, participative leadership becomes even more relevant. Leaders who involve their teams in decision making processes enhance not only staff morale but also ownership of tasks, resulting in improved service delivery.

The data revealed that healthcare workers who perceived leadership as "adequate" were more likely to demonstrate satisfactory performance. This aligns with prior findings by Wang et al. (2014), who emphasized that leadership styles promoting open communication and trust foster team cohesion and effectiveness. Sfantou et al. (2017) similarly argued that leadership is integral to the formation of a safe and efficient healthcare environment. Our findings, in tandem with these studies, underscore the necessity of leadership development at the primary healthcare level, especially in rural Indonesia.

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Further contextualization can be drawn from cross cultural research in Africa and Southeast Asia, which suggests that culturally sensitive leadership strategies enhance health worker engagement (Forsyth & Mason, 2017). In settings with hierarchical organizational cultures, such as Indonesia, leadership must balance authority with collaboration to achieve optimal performance outcomes. This implies a need for tailored training programs that not only teach leadership theory but also adapt it to local socio cultural dynamics, as emphasized by (Ratnasari et al. (2019) and Joniaková et al. (2021).

The role of motivation, both intrinsic and extrinsic, was also found to be a significant predictor of performance, reinforcing the conceptual foundations laid out by Bosold et al. (2023) and Serra & Soria (2022). Intrinsically motivated workers, driven by personal fulfillment and professional purpose, consistently outperform those whose efforts are solely driven by external incentives. However, the synergy of both motivational types is crucial. In Puskesmas Pattingalloan, respondents with high motivation achieved superior performance, particularly when organizational support such as performance based incentives and supervisory feedback were present.

This aligns with findings by Finnegan et al. (2023), who documented that environments offering career development and peer recognition tend to foster greater commitment. Moreover, in rural and resource constrained settings, motivational interventions such as community engagement, recognition programs, and attendance incentives have demonstrated measurable impacts on workforce retention and service quality (Islam et al., 2017; Rankine et al., 2021).

The implication here is that healthcare organizations must institutionalize motivation enhancing mechanisms. Performance evaluation systems should be paired with tangible rewards, and professional growth should be actively facilitated. Importantly, fostering a culture of appreciation can buffer the psychological stressors often associated with rural health service delivery (Hatch et al., 2020).

The third critical dimension examined was discipline, with a strong association found between high disciplinary adherence and satisfactory performance. Discipline in this context includes punctuality, adherence to clinical protocols, and ethical conduct. The findings corroborate research by Gruber et al. (2021), which found that clear behavioral expectations and monitoring systems foster a high performance culture. Witt et al. (2017) also emphasized that punctual attendance and task completion directly influence patient satisfaction and operational flow.

At Puskesmas Pattingalloan, where absenteeism and lateness previously disrupted service provision, improving discipline translated into tangible service improvements. Policies and practices that promote discipline such as regular feedback, role modeling by leadership, and transparent accountability structures can serve as catalysts for institutional effectiveness. The literature supports this view, with LeBel et al. (2014) highlighting that consistency and clarity in expectations promote long term compliance and trust.

While punitive disciplinary policies may yield short term results, the literature cautions against overreliance on such strategies. Instead, organizations are encouraged to adopt educative approaches, which combine enforcement with personal development and mentorship (Baxter et al., 2015). This approach is particularly important in rural healthcare settings where morale and retention are fragile.

The interaction among leadership, motivation, and discipline forms a performance ecosystem, where each element reinforces the others. As proposed by Brún et al. (2020), effective leadership creates an environment conducive to motivation, which in turn encourages disciplined behavior. In this way, the triadic relationship contributes to a culture of high performance and collective accountability. When applied to Puskesmas Pattingalloan, this model explains why improvements in leadership and motivation were associated with reductions in absenteeism and enhanced patient care.

This interaction is consistent with Sfantou et al. (2017), who posited that the integration of motivational and disciplinary strategies within a strong leadership framework leads to superior healthcare outcomes. Such a model could serve as a basis for human resource development initiatives in similar rural and decentralized healthcare contexts. The evidence also supports policy recommendations for scaling leadership training, implementing incentive structures, and reinforcing professional standards.

Long term sustainability of such performance enhancing strategies depends on systemic integration. As Forsyth & Mason (2017) suggest, performance improvement must be institutionalized through continuous professional development, feedback loops, and strategic resource allocation. In Indonesia's decentralized health system, district level health offices have the capacity to support local Puskesmas through technical assistance and policy alignment.

Participatory mechanisms, such as regular performance reviews and community feedback channels, can also contribute to sustainability. As noted by Brún & McAuliffe (2020) & McAuliffe (2020), involving staff in the co creation of work environments fosters ownership and resilience. In this way, performance is not merely imposed from above but emerges from within the organizational culture.

Limitations of this study include the cross-sectional design, which restricts causal interpretation, and its focus on a single Puskesmas, limiting generalizability. Further studies using longitudinal or qualitative approaches are needed to validate and expand these findings.

Finally, these findings hold important implications for human resource management (HRM) policy. Evidence based HRM practices advocate for mentorship, performance incentives, and supportive supervision as key levers for workforce optimization (Pieper et al., 2018). Governments and local health authorities must ensure that HRM policies are adaptive to local realities while maintaining a commitment to equity, accountability, and quality of care.

By strengthening leadership, reinforcing motivation, and cultivating discipline, health facilities such as Puskesmas Pattingalloan can improve not only internal workforce outcomes but also broader health indicators. This triadic framework, validated both by statistical findings and theoretical underpinnings, offers a strategic roadmap for enhancing primary healthcare performance in Indonesia and comparable contexts worldwide.

CONCLUSION

This study confirms that leadership, motivation, and discipline significantly influence the performance of healthcare workers in a rural primary care facility. The findings underscore that participative and communicative leadership correlates positively with enhanced staff performance, especially in geographically challenging environments such as Puskesmas Pattingalloan. Motivation, both intrinsic and extrinsic, emerged as a powerful driver of work quality and consistency. Meanwhile, disciplinary adherence including punctuality and compliance with professional standards was shown to be a vital enabler of operational efficiency and patient satisfaction.

These results contribute to the growing evidence that effective human resource management strategies at the local level are essential for strengthening health systems. The interaction between leadership, motivation, and discipline forms a synergistic framework that promotes a culture of high performance and accountability. The study also aligns with global literature that advocates for leadership development, performance based motivation systems, and supportive disciplinary structures as critical components of healthcare workforce optimization.

Beyond validating these associations empirically, this study provides practical insights for policymakers and health administrators aiming to improve service delivery through workforce development. It highlights the need for contextual leadership training, sustainable incentive programs, and education based disciplinary mechanisms. Future research could explore the longitudinal effects of such interventions, their scalability across different healthcare settings, and the role of organizational culture in mediating these relationships.

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