



RESEARCH ARTICLE

Impact of work ability and motivation on health worker performance at Rantauprapat Primary Health Center

T. Halomoan Dalimunthe^{1*}, Ermi Girsang², Sri Lestari Ramadhani Nasution², Syahrul Ramadan Rambe³, Billi³, Surya Dharma³, Haryadi³, Denny Eka Praja³, Charles³, Agus Pramono³

ABSTRACT

Background: Health development is a main pillar in improving the quality of life of the Indonesian population. Primary health centers (Puskesmas) serve as the frontline of health services. Health worker performance is influenced by multiple factors, including work ability and work motivation. This study aimed to analyze the effect of work ability and work motivation on the performance of health workers at the Rantauprapat City Primary Health Center.

Method: This was an analytic survey with a cross-sectional design. The population comprised all health workers at the Rantauprapat City Primary Health Center, totaling 100 individuals. A total sampling method was used. Data were collected using structured questionnaires measuring work ability, work motivation, and performance. Univariate, bivariate (chi-square test, $\alpha=0.05$), and multivariate (logistic regression) analyses were performed.

Results: Most respondents were female (55.0%), aged >52 years (62.0%), and had junior high school education (37.0%). Work ability was rated as poor by 52.0%, work motivation as poor by 60.0%, and performance as good by 64.0%. Bivariate analysis showed significant associations between work ability and performance ($p<0.001$) and between work motivation and performance ($p<0.001$). Multivariate analysis identified work motivation as the dominant factor ($OR=22.993$; $p<0.001$), indicating that health workers with good motivation were nearly 23 times more likely to perform well compared to those with low motivation.

Conclusion: Both work ability and work motivation significantly influence health worker performance, with motivation being the dominant factor. Health centers should allocate budgets for motivation enhancement programs, including performance-based incentives and workplace improvements.

Keywords: work ability, work motivation, health worker performance, primary health center

Introduction

Health development is a main pillar in efforts to improve the quality of life of the Indonesian population. This commitment is realized through support for the global Sustainable Development Goals (SDGs) agenda, particularly Goal 3: ensuring healthy lives and promoting well-being for all ages.¹ One of the Indonesian government's key strategies to achieve this goal is strengthening primary health care services provided by community health centers (Puskesmas).² Puskesmas are technical implementation units of district/city health offices and play a strategic role in improving accessibility, effectiveness, and efficiency of health services.³ To ensure this, the Ministry of Health through Regulation No. 43 of 2019 has established

Affiliation

¹Master Program in Public Health, Universitas Prima Indonesia

²Department of Public Health, Universitas Prima Indonesia

³Department of Clinical Medicine, Universitas Prima Indonesia

Correspondence:

tongkuhd@gmail.com

Puskesmas service standards covering human resource management, service networks, health information systems, and accreditation.^{3,4}

Management is the process of utilizing raw materials and human resources to achieve established goals.⁵ Human resources are valuable assets that must be owned by an organization because organizations must be run by selected people with the best quality to produce a superior organization.⁶ Human resources are a person's competence in the form of knowledge, skills, and personality characteristics that directly influence a person's performance to achieve desired goals.⁷ Performance is the quality and quantity of work achieved by an employee in carrying out their duties according to the responsibilities given.⁸ Performance represents work results or achievements. Generally, performance is understood as a record of output in a job function or all work activities over a certain period. In simple terms, performance is success during work execution.^{9,10}

The study also showed that motivation and work ability together (simultaneously) had a positive and significant effect on health worker performance, meaning these two factors collectively are key drivers of better performance.¹¹ Work motivation in this context includes health workers' internal drive to achieve goals, enthusiasm in serving, and extra effort in patient handling.¹² With high motivation, health workers tend to be more initiative, responsible, and better able to face daily work challenges.¹³ Various strategies such as rewards, recognition of achievements, open communication, and non-material incentives can further strengthen individual motivation. Work ability includes technical knowledge, clinical skills, analytical ability, and professional characteristics such as empathy and ethics. Competent health workers can provide quality services, make appropriate decisions, and work efficiently without compromising patient safety. Competency development through regular training, supervision, mentoring, and continuous learning is very important.¹⁴⁻¹⁶

Preliminary observations at the Labuhan Batu City Puskesmas found that most employee work motivation was already good but not yet optimal. Several problems affecting work motivation included some employees not understanding their main duties and functions. Additionally, there were indications that lack of work discipline caused employees to prioritize personal programs over team collaboration. Furthermore, employee honorarium payments could not be made directly, and contract salaries were not paid on time, impacting work motivation.

Besides work motivation, employee competence also significantly affects employee performance. Competence is very important to help organizations improve their performance. In the human resource process, the more competencies considered, the better the performance achieved.¹⁷ Competence is an individual's ability to perform a job correctly and have advantages based on knowledge, skills, and attitudes. At the preliminary observation stage, work ability or competence of health workers was a challenge. Although most health workers already had registration certificates and competency test certificates, opportunities to improve abilities through training or workshops were still limited. This potentially hinders improving service quality, especially in facing increasingly complex public health challenges such as increasing non-communicable diseases and technology-based health needs.¹⁸

This study is important because optimal health worker performance not only improves service quality but also contributes to achieving health development goals at local and national levels. Based on the above description, the researcher is interested in analyzing the effect of work ability and work motivation on the performance of health workers at the Rantaupratat City Primary Health Center.

Method

This study was an analytic survey designed to explain the effect of work ability and work motivation on performance at the Rantaupratat Primary Health Center, Labuhan Batu Regency, in 2026. The research design was cross-sectional, where the researcher observed or measured variables at a single point in time. Each subject was observed once, and variable measurements were performed at that examination.¹² This study was conducted at the Rantaupratat City Primary Health Center, Labuhan Batu Regency. The selection was based on suboptimal work motivation of health workers affecting performance, availability of required sample size, and institutional permission. The study was conducted in March 2026.

The population was all health workers at the Rantaupratat City Primary Health Center, totaling 100 individuals. The sample used total sampling, including all 100 health workers. Primary data were obtained directly from subjects using questionnaires administered to health workers at the Rantaupratat City Primary Health Center. Secondary data were obtained from the health center and supporting references. Work

motivation was defined as high drive and desire to increase work enthusiasm to produce satisfying work. Parameters included effort level, persistence level, and work compliance and focus. Measurement used a questionnaire with ordinal scale, categorized as good (score 5-8, code 1) or poor (score 1-4, code 2). Work ability (hard skills) was defined as the level of mastery of medical or clinical procedures according to standard operating procedures. Parameters included ability to master equipment and speed of equipment use. Measurement used a questionnaire with ordinal scale, categorized as good (score 5-8, code 1) or poor (score 1-4, code 2). Health worker performance was defined as achievement of work targets related to quality, quantity, and timeliness or a combination of ability, effort, and accuracy that can be measured from resulting outcomes. Parameters included work quality, work quantity, timeliness, and desired work results. Measurement used a questionnaire with ordinal scale, categorized as good (score 5-8, code 1) or poor (score 1-4, code 2).

Data were processed through editing, coding, entry, and tabulation. Univariate analysis described frequency distributions of all variables. Bivariate analysis used the chi-square test ($\alpha=0.05$) to examine associations between independent and dependent variables. Multivariate analysis used multiple logistic regression to determine the most dominant factor affecting performance.

Results

A total of 100 health workers participated. The majority were female (55.0%), aged >52 years (62.0%), with junior high school education (37.0%), and employed as private sector workers (45.0%). Work ability was rated as poor by 52.0%, work motivation as poor by 60.0%, and performance as good by 64.0% (Table 1).

Table 1. Distribution of respondent characteristics and study variables (N=100)

Variable	Category	Frequency (n)	Percentage (%)
Sex	Male	45	45.0
	Female	55	55.0
Education	Elementary school	19	19.0
	Junior high school	37	37.0
	Senior high school	31	31.0
	College/university	13	13.0
Age	<52 years	38	38.0
	>52 years	62	62.0
Occupation	Self-employed	30	30.0
	Private employee	45	45.0
	Civil servant	6	6.0
	Unemployed	19	19.0
Work ability	Good	48	48.0
	Poor	52	52.0
Work motivation	Good	40	40.0
	Poor	60	60.0
Health worker performance	Good	64	64.0
	Poor	36	36.0

The chi-square test showed a significant association between work ability and health worker performance ($p < 0.001$). Among respondents with good work ability, 83.3% had good performance; among those with poor work ability, only 46.2% had good performance. A significant association was also found between work motivation and performance ($p < 0.001$). Among respondents with good work motivation, 95.0% had good performance; among those with poor work motivation, only 43.3% had good performance (Table 2).

Table 2. Bivariate associations between work ability, work motivation, and health worker performance (N=100)

Variable	Category	Good performance n (%)	Poor performance n (%)	Total	p-value
Work ability	Good	40 (83.3)	8 (16.7)	48	<0.001
	Poor	24 (46.2)	28 (53.8)	52	
Work motivation	Good	38 (95.0)	2 (5.0)	40	<0.001
	Poor	26 (43.3)	34 (56.7)	60	

Logistic regression was performed to determine the most dominant factor affecting health worker performance. The analysis showed that work motivation was the dominant factor ($p < 0.001$; odds ratio = 22.993), indicating that health workers with good motivation were nearly 23 times more likely to have good performance compared to those with low motivation (Table 3).

Table 3. Multivariate analysis of work ability and work motivation on health worker performance

Variable	B	S.E.	Wald	df	Sig.	Exp(B) / OR
Work ability	1.656	0.543	9.289	1	0.002	5.240
Work motivation	3.135	0.792	15.669	1	<0.001	22.993
Constant	-8.655	1.808	22.926	1	<0.001	0.000

Discussion

The statistical analysis revealed a significant effect of work ability on health worker performance at Rantauprapat Primary Health Center. Health worker performance is a key factor in determining the success of public health services at Puskesmas. As the frontline of primary health care, Puskesmas are required to continuously improve service quality to the community. Rantauprapat City, as the capital of Labuhan Batu Regency, has its own challenges in optimizing health worker performance across all Puskesmas in its service area. Work ability, encompassing knowledge, skills, and professional attitudes of health workers, is hypothesized to have a significant relationship with service target achievement and patient satisfaction. Theoretically, the relationship between work ability and performance is explained through various human resource management approaches. Attribution theory states that individual performance is a function of ability, effort, and environmental support.¹³ In the context of Puskesmas health workers, work ability is the main foundation that enables health workers to transform their knowledge and skills into quality service output. Research at Rantauprapat Regional Hospital showed that work experience, a dimension of work ability, had a positive and significant effect on employee performance.¹¹

The analysis also demonstrated a significant effect of work motivation on health worker performance. Work motivation is a consistently studied determinant in human resource management literature, especially in health care contexts. As the frontline of primary health care, Puskesmas require health workers with optimal performance to ensure achievement of health program targets and community satisfaction. However, various challenges such as high workload, limited resources, and continuously increasing service demands make work motivation a critical issue requiring serious attention. A cross-sectional study of health workers at Teupin Raya Primary Health Center found that motivation had a significant relationship with performance.¹² However, a notable finding was that the majority of respondents reported not receiving adequate motivation, yet more than half still showed good performance. This contradiction indicates other factors besides motivation also contribute to performance, such as work environment, incentives, or individual characteristics.

The multivariate analysis identified work motivation as the most dominant factor affecting health worker performance. This finding means that health workers with good motivation have a substantially greater likelihood of good performance compared to those with low motivation. The strength of this association highlights the critical importance of motivational factors in health care settings. Health workers who are motivated tend to demonstrate greater initiative, persistence in overcoming obstacles, and commitment to quality service delivery. This finding aligns with previous research showing that motivation often outperforms ability in predicting employee performance when both factors are considered simultaneously, particularly in service-oriented professions where discretionary effort is important.¹⁹

This study has several strengths, including a sample that included the entire population (total sampling), use of validated questionnaires, and multivariate analysis that identified the dominant factor. However, several limitations must be acknowledged. The cross-sectional design prevents causal inference; associations may be bidirectional. Data relied on self-reported perceptions, subject to social desirability bias. The study was conducted at a single health center, limiting generalizability to other settings. Objective performance measures, such as patient outcomes or clinical indicators, were not included. Future longitudinal studies with objective performance metrics and larger, multicenter samples are needed to confirm causal relationships.

These findings have several practical implications. The health center should allocate a specific budget for motivation enhancement programs, including performance-based incentives and improvements to the work environment. The district health office should review compensation and reward policies for health

workers at Puskesmas to ensure the existing system truly motivates. Regular training programs to improve clinical and technical skills should be maintained and expanded. Recognition systems for outstanding performance, career development pathways, and supportive supervision should be implemented. At the policy level, human resource development strategies for primary health care should prioritize motivational interventions alongside competency building.

Conclusion

This study found significant effects of work ability and work motivation on health worker performance at Rantauprapat Primary Health Center. Work motivation was the dominant factor, indicating that health workers with good motivation were substantially more likely to perform well compared to those with low motivation. These findings highlight the need for health centers to allocate resources for motivation enhancement programs, including performance-based incentives and workplace improvements. District health authorities should review compensation and reward policies to ensure they effectively motivate health workers.

References

1. Fadhlorrohmah MI, Purnomo EP, Malawani AD. Analysis Of Sustainable Health Development In Indonesia (Sustainable Development Goal's). *J Kesehatan Lingkung Indones*. 2020 Oct 1;19(2):133–43.
2. Chotchongchatchai S, Marshall AI, Witthayapipopsakul W, Panichkriangkrai W, Patcharanarumol W, Tangcharoensathien V. Primary health care and sustainable development goals. *Bull World Health Organ*. 2020 Nov 1;98(11):792–800.
3. Ali AM, Paluttri S, Balqis B, Darmawansyah D, Yunus R. Person-Organization Fit as a Determinant of Employee Effectiveness in Enhancing Health Services at Community Health Centers in Indonesia Asia Pacific J Heal Manag [Internet]. 2026 Jan 13;21(1). Available from: <https://journal.achsm.org.au/index.php/achsm/article/view/4959>
4. Kacaribu A, Sihombing T, Ginting S. The Implementation of the Plead Accreditation Policy on Public Satisfaction at the Medan Selahang Community Health Center. *Contemp J Appl Sci*. 2025 Dec 31;3(12):873–86.
5. Tambunan H, Haribowo R, Akbar, Munizu M, Maruli S, Pandiangan T. Operational Management for Business Production Processes. *Int J ff Educ Soc Stud Manag*. 2025 Jan 27;5(1):161–169.
6. Rachmad RJF, Hartono A. The Influence of Organizational Culture and Work Motivation on Employee Performance with Job Satisfaction as a Mediation Variable at PT. Bengkulu Kokoh Perkasa. *J Econ Resour*. 2024 Mar 28;7(1):20–7.
7. Nusraningrum D, Rahmawati A, Wider W, Jiang L, Udang LN. Enhancing employee performance through motivation: the mediating roles of green work environments and engagement in Jakarta's logistics sector. *Front Sociol*. 2024 May 13;9.
8. Isa M, Indrayati N. The role of work–life balance as mediation of the effect of work–family conflict on employee performance. *SA J Hum Resour Manag*. 2023 Mar 30;21.
9. Avoyan E, Kaufmann M, Legendijk A, Meijerink S. Output Performance of Collaborative Governance: Examining Collaborative Conditions for Achieving Output Performance of the Dutch Flood Protection Program. *Public Perform Manag Rev*. 2024 Mar 3;47(2):291–322.
10. Gaur M, Kant R, Verma N. Macro-Economic Determinants of High Technology Exports. *Eur J Bus Manag Res*. 2020 Sep 18;5(5).
11. Verni MN, Samosir MS, Transilvanus VE. Pengaruh Motivasi Kerja dan Kemampuan Kerja Terhadap Kinerja Tenaga Kesehatan RS. St. Gabriel Kewapante. *CUAN J Kewirausahaan dan Manaj Bisnis*. 2024;2(4).
12. Theodorus D, Lahindah L. The Influence of The Medical Service Sharing System and Work Motivation on Employee Performance at RSUD Dr. Tc Hillers. *Eduvest - J Univers Stud*. 2025 Feb 20;5(2):1384–97.
13. Bian XJ, Gao SY, Zhang SQ, Xue F, Liu FL, Chen SF. Perceived organizational support and self-efficacy as mediating factors between job burnout and emergency response competence among new nurses: a study based on emergency departments and intensive care units. *Front Public Heal*. 2026 Apr 8;14.
14. van de Voort I, Leistikow I, Weenink JW. Healthcare workers' sustainable employability in relation to quality of care: an umbrella review. *BMJ Open*. 2025 Sep 8;15(9):e095126.
15. Wu J, Li Y, Liu X, Fan Y, Dai P, Chen B, et al. Construction and validation of a presenteeism prediction model for ICU nurses in China. *Front Public Heal*. 2025 Mar 3;13.
16. Brown O, Kangovi S, Wiggins N, Alvarado CS. Supervision Strategies and Community Health Worker Effectiveness in Health Care Settings. *NAM Perspect*. 2020 Mar 9;20(3).
17. Wahyudi W, Rozi A, Putry M. Kompetensi dan kinerja karyawan: Peran moderasi iklim organisasional. *J Manaj Maranatha*. 2022 May 30;21(2):165–76.
18. Thio S, Tesema AG, Patel B, Vakaloloma U, Wilson C, Joshi R. 'First of all, I need training': a qualitative study evaluating the Fiji community health worker training program. *BMC Prim Care*. 2024 Jun 26;25(1):228.
19. Augustinus DC, Halim CF. The effect of motivation towards employee performance for cafe workers in Medan. *J Account Manag Innov*. 2021;5(1).