
Factors Associated With Employee Performance At Rawasari Public Health Center, Jambi City, 2026

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Abstract

Employee performance is an important component in maintaining the quality of primary health services. At UPTD Rawasari Community Health Center, increasing patient visits, limited human resources, physical workplace conditions, mental workload, work stress, and work motivation were identified as relevant factors. This study aimed to determine the relationships between physical work environment, mental workload, work stress, work motivation, and employee performance. A quantitative cross-sectional study was conducted at UPTD Rawasari Community Health Center, Jambi City, in 2026. The population consisted of 54 employees and total sampling was planned; 51 eligible employees were included in the final analysis. Data were collected using structured questionnaires: the NIOSH Generic Job Stress Questionnaire Physical Environment, NASA-TLX, HSE Management Standards Indicator Tool, Multidimensional Work Motivation Scale, and Individual Work Performance Questionnaire. Data were analyzed using univariate analysis and Fisher-Freeman-Halton Exact Test at $\alpha=0.05$. Physical work environment was significantly associated with employee performance ($p=0.022$). Mental workload, work stress, and work motivation were also significantly associated with employee performance (each $p<0.001$). These findings indicate that employee performance at UPTD Rawasari Community Health Center is statistically associated with physical workplace conditions, mental workload, work stress, and work motivation.

Keywords: Employee Performance, Physical Work Environment, Mental Workload, Work Stress, Work Motivation

INTRODUCTION

Employee performance is an important component of service quality because the implementation of health programs and direct patient services depends on the ability of employees to complete tasks accurately, consistently, and responsibly. The thesis underlying this article describes a broader concern about declining employee engagement and productivity and places employee performance within individual, psychological, and organizational factors. In the organizational perspective, motivation, work environment, leadership, reward systems, technology, policies, and procedures may shape work behavior, while workload is also related to the demands and resources available to employees (Rambe, 2025; Budiasa, 2021). In primary health care, these factors are particularly relevant because employees must simultaneously provide clinical services, complete administrative documentation, meet program targets, coordinate across professions, and respond to patient needs.

The situation at UPTD Rawasari Community Health Center, Jambi City, provides a specific context for examining these factors. The working area serves approximately 55,537 residents. Patient visits increased from 38,994 in 2023 to 40,951 in 2024, while the number of employees decreased from 60 to 56. The preliminary performance records for the first quarter of 2026 also showed a decline in the proportion of employees categorized as having good performance, from 92.59% in January to 72.22% in March. At the same time, attendance was relatively high, but punctual attendance was lower, indicating that attendance alone did not fully describe the work-performance condition. The thesis also reports preliminary observations of narrow rooms, suboptimal ventilation and lighting, high temperature and humidity, and non-optimal arrangement of cables and equipment.

The physical work environment is relevant because workplace conditions can affect comfort, concentration, and the ability to sustain work activities. In the study location, the preliminary measurement in the general outpatient room recorded average lighting of 53.32 lux, temperature of 29.4°C, and humidity of 75.1%; the sterilization room had a temperature of 29.4°C and humidity of 85.1%. These observations were consistent with the questionnaire finding that more than half of employees assessed the physical work environment as less good. Previous studies cited in the thesis also reported associations between work environment and employee performance, although findings have not been fully consistent across settings (Dahlia & Adrianto, 2024; Safutri et al., 2025; Tofani et al., 2026).

Mental workload is another relevant factor. Employees in a health center may need to process patient information, make decisions, maintain concentration, complete administrative tasks, meet reporting requirements, and handle several responsibilities within limited time. The thesis used NASA-TLX to assess six dimensions of workload: mental demand, physical demand, temporal demand, performance, effort, and frustration. In the study, 62.8% of employees were categorized as having a rather high level, high, or very high mental workload. Previous studies have also reported relationships between workload and performance in health-care workers, although the direction and magnitude may vary by occupational setting and analytical approach (Putri et al., 2024; Sundari & Ellina, 2022; Hidayati & Putri, 2024).

Work stress may emerge when job demands exceed available resources or when employees experience limited control, insufficient support, role ambiguity, problematic relationships, or organizational changes. The HSE Management Standards framework used in this study covers demands, control, management support, peer support, relationships, role, and change (HSE, 2021). In Rawasari, 39.2% of respondents were in the high or very high stress categories. The thesis describes work pressure associated with service volume, administrative requirements, program targets, task accumulation, and interactions with patients. Studies among health workers have likewise reported associations between work stress and performance, while other studies have found that stress may weaken when workload and other organizational factors are considered simultaneously (Shafira et al., 2024; Demir et al., 2025; Hidayati & Putri, 2024).

Work motivation is also conceptually linked to the direction, intensity, and persistence of work behavior. This study used the Multidimensional Work Motivation Scale (MWMS), which includes intrinsic motivation, extrinsic motivation, introjected regulation, identified regulation, and amotivation (Gagné et al., 2015; Trépanier et al., 2023). In the preliminary survey, employees generally reported that their work was important and that they wanted to provide good service, but half reported dissatisfaction with their jobs. The thesis also describes limitations in performance-based rewards, uneven workload distribution, and accumulated fatigue. Studies in primary health-care settings have reported relationships between work motivation and employee performance (Syam & Afdal, 2023; Taqwin et al., 2023; Kusumawati et al., 2024).

Although physical work environment, workload, stress, and motivation have each been studied, the thesis identifies a contextual gap: the four variables had not been examined simultaneously in the specific setting of UPTD Puskesmas Rawasari, Jambi City. Previous studies also show inconsistent findings for several variables, suggesting that context, workforce characteristics, organizational systems, instruments, and analysis may influence results. Therefore, this study was conducted to determine the relationships between physical work environment, mental workload, work stress, work motivation, and employee performance among employees of UPTD Rawasari Community Health Center, Jambi City, in 2026. The study focuses on statistical associations and does not attempt to establish causal relationships.

RESEARCH METHODS

Study design and setting. This study used a quantitative approach with a cross-sectional design. Independent variables and the dependent variable were measured at the same point in time. The research was conducted at UPTD Rawasari Community Health Center, Jambi City, in 2026; the thesis specifies implementation beginning in March 2026.

Population and sampling. The population consisted of 54 health-center employees, including medical, nursing, midwifery, pharmaceutical, public health, environmental health, nutrition, laboratory/biomedical, and supporting health personnel. Total sampling was planned. Inclusion criteria were active employees working at UPTD Rawasari Community Health Center, not on long-term leave or study assignment, with at least one year of employment, involved directly or indirectly in health-center activities, and willing to participate. Cleaning-service personnel, ambulance drivers, and security personnel were excluded. After eligibility and data completeness were considered, 51 employees were included in the final analysis.

Data collection and instruments. Primary data were collected directly using structured questionnaires after the study purpose and completion procedures were explained to respondents. Secondary data were obtained from the Jambi City Health Office and UPTD Rawasari Community Health Center and included population, health-worker, patient-visit, employee-performance, and attendance information. Physical work environment was measured using the Physical Environment component of the NIOSH Generic Job Stress Questionnaire, consisting of 10 favorable items covering noise, lighting, temperature, humidity, air circulation, air quality, hazardous-material safety, and workplace comfort. Mental workload was assessed using NASA-TLX across six dimensions. Work stress was assessed with the 35-item HSE Management Standards Indicator Tool covering seven dimensions. Work motivation was measured with the 19-item MWMS across five dimensions. Employee performance was measured using the 18-item IWPQ covering task performance, contextual performance, and counterproductive work behavior; counterproductive items were reverse-scored so that higher scores indicated better performance.

Variable categorization. Physical work environment scores ranged from 10–40 and were categorized using the sample mean of 30.35: good (>30.35 ; operationalized as 31–40) and less good (≤ 30.35 ; 10–30). NASA-TLX scores were categorized as low (0–9), moderate (10–29), agak tinggi (30–49), high (50–79), and very high (80–100). HSE stress scores were categorized as low (140–175), moderate (105–139), high (70–104), and very high (35–69). MWMS scores were categorized using the sample mean of 83.12: high (>83.12) and low (≤ 83.12). IWPQ scores were categorized as low (<59), moderate (59 to <64), and high (≥ 64).

Data analysis. Data were processed and analyzed using SPSS. Univariate analysis was used to describe respondent characteristics and the distribution of each study variable. Bivariate analysis examined the relationship between each independent variable and employee performance using Chi-Square at $\alpha=0.05$. Expected counts were examined; when the Pearson Chi-Square assumption was not adequately met, Fisher-Freeman-Halton Exact Test was used for the RxC contingency tables. A p-value <0.05 was interpreted as statistically significant. Because the design was cross-sectional and the analysis was bivariate, significant findings were interpreted as associations rather than evidence of causation or variable dominance.

Ethical considerations. The research followed the procedures described in the thesis, including confidentiality of respondent information and informed consent. Respondents were informed about the purpose and procedure before completing the questionnaire and

participated voluntarily. The thesis file reviewed for this article does not state a specific ethical-clearance certificate number; therefore, no certificate number is reported here.

RESULTS AND DISCUSSION

Respondent characteristics. The final analysis included 51 employees. The largest occupational groups were nurses (33.3%) and midwives (25.5%), together accounting for 58.8% of respondents. Diploma/bachelor education predominated (96.1%), and women represented 90.2% of the sample. The largest age group was 52–58 years (31.4%), while length of employment was distributed between 2–13 years and 26–37 years (each 39.2%).

Table 1. Characteristics of respondents

Characteristic	Category	n	%
Age	22–29 years	7	13.7
	30–37 years	9	17.6
	38–44 years	9	17.6
	45–51 years	10	19.6
	52–58 years	16	31.4
Education	Senior high school/vocational	2	3.9
	Diploma/Bachelor	49	96.1
Length of employment	2–13 years	20	39.2
	14–25 years	11	21.6
	26–37 years	20	39.2
Sex	Male	5	9.8
	Female	46	90.2
Total		51	100.0

Source: Primary data, 2026

Distribution of study variables. More than half of respondents assessed the physical work environment as less good. Mental workload was distributed across five categories, with 62.8% in the rather high, or very high categories. Work stress was most commonly moderate, while 39.2% were in the high or very high categories. Work motivation was slightly more often categorized as low. Employee performance was most commonly moderate, followed by low and high performance.

Table 2. Distribution of study variables

Variable	Category	n	%
Physical work environment	Good	22	43.1
	Less good	29	56.9
Mental workload	Low	7	13.7
	Moderate	12	23.5
	Somewhat high	11	21.6
	High	10	19.6
	Very high	11	21.6
Work stress	Low	8	15.7
	Moderate	23	45.1
	High	8	15.7
	Very high	12	23.5
Work motivation	High	24	47.1
	Low	27	52.9
Employee performance	Low	20	39.2
	Moderate	22	43.1
	High	9	17.6
Total		51	100.0

Source: Primary data, 2026

Physical work environment and employee performance. Among employees who assessed the physical work environment as good, 18.2% had low performance, 54.5% had moderate performance, and 27.3% had high performance. In the less-good environment group, the corresponding distribution was 55.2%, 34.5%, and 10.3%. The Fisher-Freeman-Halton Exact Test yielded $p=0.022$. Thus, a statistically significant association was observed between physical work environment and employee performance.

Table 3. Relationship between physical work environment and employee performance

Physical work environment	Low n (%)	Moderate n (%)	High n (%)	Total	p-value
Good	4 (18.2)	12 (54.5)	6 (27.3)	22 (100.0)	0.022
Less good	16 (55.2)	10 (34.5)	3 (10.3)	29 (100.0)	
Total	20 (39.2)	22 (43.1)	9 (17.6)	51 (100.0)	

Source: Primary data, 2026; Fisher-Freeman-Halton Exact Test

The finding is consistent with studies in primary health-care settings that report relationships between work environment and employee performance (Dahlia & Adrianto, 2024; Safutri et al., 2025; Tofani et al., 2026). In Rawasari, the preliminary physical measurements provide contextual support: low lighting, relatively high temperature and humidity, and less ergonomic arrangements were observed. These conditions can be relevant to comfort and concentration. However, the study measured the physical environment through employee perception, and the cross-sectional design does not establish that the physical environment caused changes in performance. The result therefore supports an association within the observed workforce rather than a causal conclusion.

Mental workload and employee performance. The distribution shows a graded descriptive pattern. In the low workload group, 71.4% had high performance and none had low performance. Among employees with high workload, 70.0% had low performance, while the proportion of low performance reached 81.8% in the very-high group. Fisher-Freeman-Halton Exact Test produced $p<0.001$, indicating a statistically significant association.

Table 4. Relationship between mental workload and employee performance

Mental workload	Low n (%)	Moderate n (%)	High n (%)	Total	p-value
Low	0 (0.0)	2 (28.6)	5 (71.4)	7 (100.0)	<0.001
Moderate	1 (8.3)	7 (58.3)	4 (33.3)	12 (100.0)	
Somewhat high	3 (27.3)	8 (72.7)	0 (0.0)	11 (100.0)	
High	7 (70.0)	3 (30.0)	0 (0.0)	10 (100.0)	
Very high	9 (81.8)	2 (18.2)	0 (0.0)	11 (100.0)	
Total	20 (39.2)	22 (43.1)	9 (17.6)	51 (100.0)	

Source: Primary data, 2026; Fisher-Freeman-Halton Exact Test

The result is compatible with the workload literature cited in the thesis. Mental workload involves information processing, concentration, decision making, effort, and time pressure. In a health-center environment, these demands can occur simultaneously with patient care, documentation, reporting, program targets, and coordination. Similar associations between workload and performance have been reported among nurses and health workers (Putri et al., 2024; Sundari & Ellina, 2022). At the same time, the present analysis did not estimate effect size and did not control for confounding variables; therefore, the p-value indicates statistical association, not the magnitude or causal direction of the relationship.

Work stress and employee performance. All respondents with low work stress had high performance. In the moderate-stress group, 95.7% had moderate performance and 4.3% had high performance. All respondents in the high and very-high stress categories had low performance. Fisher-Freeman-Halton Exact Test yielded $p<0.001$, indicating a statistically significant association between work stress and employee performance.

Table 5. Relationship between work stress and employee performance

Work stress	Low n (%)	Moderate n (%)	High n (%)	Total	p-value
Low	0 (0.0)	0 (0.0)	8 (100.0)	8 (100.0)	<0.001
Moderate	0 (0.0)	22 (95.7)	1 (4.3)	23 (100.0)	
High	8 (100.0)	0 (0.0)	0 (0.0)	8 (100.0)	
Very high	12 (100.0)	0 (0.0)	0 (0.0)	12 (100.0)	
Total	20 (39.2)	22 (43.1)	9 (17.6)	51 (100.0)	

Source: Primary data, 2026; Fisher-Freeman-Halton Exact Test

The pattern is consistent with the thesis discussion and with studies among health workers reporting an association between work stress and performance (Shafira et al., 2024; Asri et al., 2023; Devita et al., 2025). The HSE framework emphasizes demands, control, support, relationships, role, and organizational change as work-stress dimensions. The operational context at Rawasari, patient service, administrative demands, program targets, task accumulation, and patient interactions, provides plausible work demands that may coincide with stress. However, other studies have found different results when workload and stress are modeled together, indicating that organizational context and other factors can alter the observed association (Hidayati & Putri, 2024). Because this study is cross-sectional and bivariate, the observed relationship should not be interpreted as evidence that stress alone determines performance.

Work motivation and employee performance. Among employees with high work motivation, 62.5% had moderate performance and 37.5% had high performance, with no low-performance respondents. Among employees with low motivation, 74.1% had low performance and 25.9% had moderate performance, with no high-performance respondents. Fisher-Freeman-Halton Exact Test produced $p<0.001$, indicating a statistically significant association.

Table 6. Relationship between work motivation and employee performance

Work motivation	Low n (%)	Moderate n (%)	High n (%)	Total	p-value
High	0 (0.0)	15 (62.5)	9 (37.5)	24 (100.0)	<0.001
Low	20 (74.1)	7 (25.9)	0 (0.0)	27 (100.0)	
Total	20 (39.2)	22 (43.1)	9 (17.6)	51 (100.0)	

Source: Primary data, 2026; Fisher-Freeman-Halton Exact Test

The finding is consistent with research in health centers and other health-care settings showing that motivation is associated with employee performance (Syam & Afdal, 2023; Taqwin et al., 2023; Kusumawati et al., 2024). The MWMS conceptualizes motivation as multidimensional rather than as a single external incentive. In Rawasari, the thesis reports that employees generally regarded their work as important, while half were not satisfied with their jobs and performance-based reward systems were not yet optimal. This suggests that motivation may involve both the meaning attached to health-service work and organizational conditions that support or constrain sustained effort. Nevertheless, the present study did not separately analyze MWMS dimensions or control for other determinants; therefore, the association should not be interpreted as a single-direction causal effect.

Integrated interpretation. All four examined variables showed statistically significant associations with employee performance in the bivariate analysis. The patterns were internally coherent with the descriptive findings: less-good physical environments, higher mental workload, higher work stress, and lower motivation were more frequently accompanied by lower performance categories. The findings should nevertheless be interpreted within the study design. The sample consisted of 51 employees from one health center, variables were measured at one time point, several variables were categorized from continuous scores, and the analysis did not control for potential confounders such as age, tenure, job group, leadership, organizational support, or other work conditions. Therefore,

the results identify factors statistically associated with performance in this setting rather than demonstrating that one factor is the primary cause of performance differences.

CONCLUSION

Among employees of UPTD Puskesmas Rawasari, physical work environment, mental workload, work stress, and work motivation were each statistically associated with employee performance in 2026. More than half of respondents assessed the physical work environment as less good, 62.8% had mental workload in the agak tinggi-to-very-high range, 39.2% had high-to-very-high work stress, and 52.9% had low work motivation. The observed associations were statistically significant for physical work environment ($p=0.022$), mental workload ($p<0.001$), work stress ($p<0.001$), and work motivation ($p<0.001$). The findings support attention to physical workplace conditions, workload management, psychosocial work-stress management, and work motivation as interconnected areas in efforts to support employee performance. Because the study was cross-sectional and based on bivariate analysis, the findings should be interpreted as statistical associations rather than causal effects.

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