

# The Impact of Motivation, Stress, and Fatigue on the Performance of Primary Health Care Employees in Surakarta

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## ABSTRACT

**Background:** The performance of health personnel is one of the biggest reasons for the good and bad health services. There are various factors that can affect employee performance such as motivation, stress, and work fatigue. This study aims to see if there is an effect of motivation, stress, and fatigue on the performance of Puskesmas employees.

**Subjects and Method:** This study is a quantitative study using a cross-sectional design. This study was conducted on 17 health centers in the city of Surakarta, Central Java, Indonesia starting from August to September 2024. With a sample of 202 health center employees who were randomly selected or using a simple random sampling. The dependent variable in this study is the performance of health center employees. The independent variables in this study were motivation, stress, and fatigue. Data collection was carried out using a questionnaire and analyzed with path analysis.

**Results:** Motivation has an influence on improving performance and is statistically significant. Motivation ( $b = 1.14$ ;  $CI\ 95\% = 1.06\ to\ 1.06$ ;  $p < 0.001$ ), stress ( $b = 0.83$ ;  $CI\ 95\% = 0.70\ to\ 0.95$ ;  $p < 0.001$ ), has a statistically significant effect on performance degradation, and fatigue ( $b = 0.06$ ;  $CI\ 95\% = 0.02\ to\ 0.12$ ;  $p = 0.041$ ), had a degrading effect and was statistically significant.

**Conclusion:** The performance of health center employees is influenced by motivation, stress, and fatigue.

**Keywords:** Motivation, stress, fatigue, performance

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## BACKGROUND

The performance of health personnel is one of the biggest reasons for the good health services. The management of health facilities must study how and what are the factors affect employee performance, both intrinsic and extrinsic factors (Abdullah et al., 2021). Performance is actually the same as work

performance, performance is the result of work and how the work process takes place. An employee can have a good performance if the employee can do their job well and their work results are in accordance with what they have to achieve (Pangabea et al., 2024). Some factors that can affect performance

include individual worker factors, organizational factors, and psychological factors (Idaini and Lukman, 2022).

Motivation has an important role in determining the extent to which health professionals are vulnerable to harm and demonstrate optimal performance in fulfilling their vital duties (Tasya and Gilang, 2020). In the realm of Puskesmas, which prioritizes public health services, a comprehensive understanding of the impact of motivation on staff performance can serve as a first step to identify prospective areas for improvement and devise effective methods to overcome the obstacles faced. Work motivation aims to foster a work atmosphere that is conducive to enthusiasm and creativity, thereby improving the performance of health personnel at the Tenggeng Lembang Health Center (Milliana et al., 2023).

Work fatigue is one of the factors that can increase the rate of errors at work (Mamengko and Saerang, 2020). Unaddressed work fatigue can cause various fatal work problems and result in accidents at work. In accordance with study conducted by Suci and Heryadi (2024) which shows that work fatigue has a negative and significant effect on employee performance.

In a study conducted by Fan and Smith (2020), there is a significant relationship between work stress and work fatigue in nurses. This is in accordance with the results of study conducted by Mayasari (2018) that there is a relationship between work stress and work fatigue based on  $\chi^2$  test, including the relationship of weight. This is in accordance with one of the stress theories that can be applied in occupational stress is the theory of behavioral barriers (Basalamah et al., 2021).

Based on the above problems, this study is important to conduct in order to analyze the influence of motivation, stress, and fatigue on the performance of Puskesmas employees.

## SUBJECTS AND METHOD

### 1. Study Design

This type of study is a quantitative study using a cross-sectional study design. This study was conducted in 17 health centers in the city of Surakarta, Central Java, Indonesia. This study was conducted in August-September 2024.

### 2. Population and Sample

The population of this study is employees at the Surakarta City Regional Health Center which is around 915 and were randomly selected. The sample in this study was 202 health personnel at the Surakarta City Health Center. The sampling technique in this study is simple random sampling, which is random sampling.

### 3. Research Variables

The bound variable in this study is the performance of health center employees. The independent variables in the study were motivation, stress, and fatigue.

### 4. Operational Definition

**Motivation** is a driving force that is able to create employee enthusiasm so that they can work effectively, integrated and willing to work together with all their abilities. Motivation has an important role in determining the extent to which healthcare professionals are vulnerable to harm and demonstrating optimal performance in fulfilling their vital duties (Tasya and Gilang, 2020).

**Stress** is a state of tension that can affect a person's condition, emotions and thought processes. Dimensions in work stress include workload, role conflicts, and role ambiguity (Rodríguez-Cifuentes et al., 2018).

**Work fatigue** is a condition experienced by the workforce that can result in a decrease in vitality and work productivity (Manalu, 2021).

**Employee performance** is the result of work quantity and the quality that can be

achieved by employees in carrying out their duties in accordance with the responsibilities given to employees. Performance is actually the same as work performance, performance is the result of work and how the work process takes place. An employee can have a good performance if they can do their job well and their work results are in accordance with what they must achieve (Pangabea et al., 2024).

**5. Data Analysis**

This univariate analysis was carried out with the aim of finding out the frequency distribution and percentage of each study variables. Bivariate analysis, was carried out on two variables that were estimated to be correlated. Multivariate analysis using path analysis using the Stata 13 program.

**6. Research Ethics**

Study ethics include consent sheets, anonymity, confidentiality, and ethical feasibility. The ethical feasibility of this study comes from the Health Study Ethics Committee of Dr. Moewardi Surakarta with number: 2.130/VIII/HREC/2024.

**RESULTS**

**1. Univariate Analysis**

Table 1 shows that the results of the analysis show that most of the respondents have a female gender of 157 people (77.72%). The majority work for 8 hours per day as many as 190 people (94.06%), and most of them have the last D3 education as many as 120 people (59.41%).

**Table 1. Characteristic of respondents**

Characteristic	Category	Frequency (n)	Percentage (%)
<b>Gender</b>			
	Man	45	22.28
	Woman	157	77.72
<b>Length of Service</b>			
	7 hours	6	2.97
	8 hours	190	94.05
	9 hours	5	2.48
	10 hours	1	0.50
<b>Highest Education</b>			
	Senior High School	15	7.42
	Diploma3	120	59.41
	D4/Bachelor	12	5.94
	Profession	52	25.74
	Master Program	3	1.49

Table 2 shows the results of univariate analysis based on continuous data with a total of 202 subjects. The average age of respondents was 34.86 years (Mean: 24.68; SD= 7.57) with a minimum age of 24 years and a maximum age of 57 years. Performance showed results (Mean = 10.89; SD= 2.20) with a minimum score of 0 and a maximum score of 12.

Motivation showed results (Mean: 8.90; SD: 1.79) with a minimum score of 0 and a score of 10. Stress showed results (Mean: 1.41; SD: 1.92) with a minimum score of 0 and a score of 10. Work fatigue showed an average score of 1.94 (Mean: 1.94; SD: 2.42) with a minimum score of 0 and a score of 13.

**Table 2. Univariate analysis of continuous data**

Characteristic	N	Mean	SD	Min	Max
Age	202	34.86	7.57	24	57
Performance	202	10.89	2.20	0	12
Motivation	202	8.90	1.79	0	10
Stress	202	1.41	1.92	0	10
Fatigue	202	1.94	2.42	0	13

**2. Bivariate Analysis**

Table 3 shows that motivation is significant to work motivation (b=1.10; CI 95%= 1.03 to 1.18; p<0.001). A person who is highly motivated will improve performance by 1.10 times compared to someone who has low motivation. Significant work fatigue on work motivation (b=-0.26; 95% CI = -0.38 to -0.14;

p<0.001). A person who has high work fatigue will decrease performance by 0.26 times compared to someone who has low work fatigue. Significant stress on work motivation (b=-1.18; CI 95% = -0.34 to -0.25; p=0.023). A person who has a high level of stress will decrease performance by 1.18 times compared to someone who has a low level of stress.

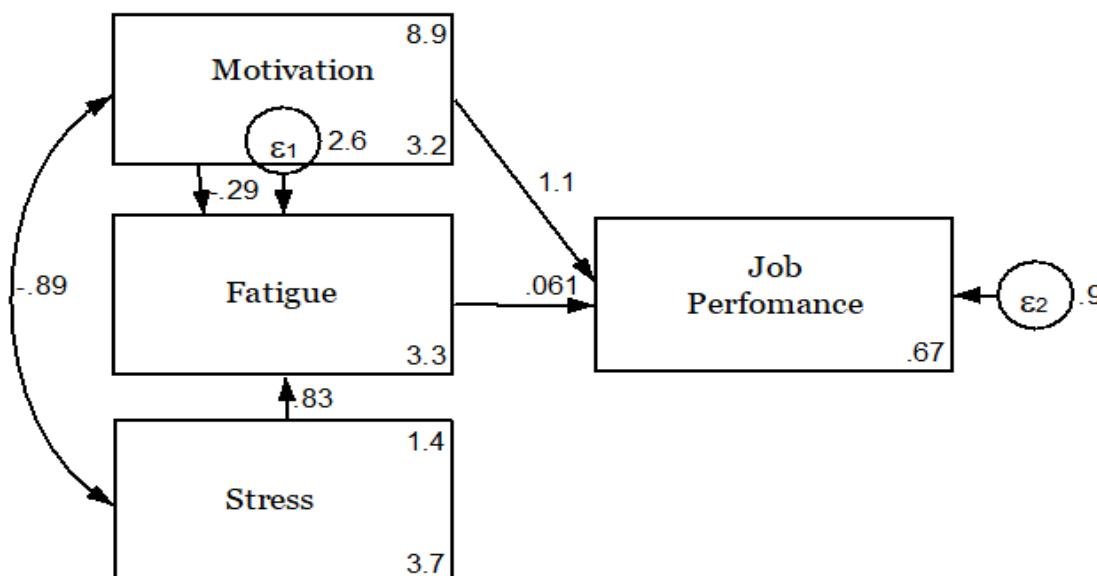
**Table 3. The Relationship between Motivation, Work Fatigue, Stress, and Work Performance**

Independent Variables	(b)	95% CI		p
		Lower Limit	Upper Limit	
Motivation	1.10	1.03	1.18	<0.001
Work fatigue	-0.26	-0.38	-0.14	<0.001
Stress	-1.18	-0.34	-0.25	0.023

**3. Multivariate analysis**

The multivariate analysis in this study uses path analysis to determine the influence of

motivation, work fatigue, and stress variables on performance. Hypothesis testing begins with testing the suitability of the model.



**Figure 1. Model Specification of the Factors Associated with Employee’s Performance**

There is an influence of motivation on the performance of health center employees. Every 1 increase in motivation in a person will be followed by an increase in performance by 1.14 units and statistically significant ( $b = 1.14$ ;  $CI\ 95\% = 1.06\ to\ 1.06$ ;  $p < 0.001$ ).

There is an effect of fatigue on the performance of health center employees. Every 1 increase in fatigue per unit will be followed by a decrease in performance of -0.06 units and statistically significant ( $b = -0.06$ ;  $CI\ 95\% = 0.02\ to\ 0.12$ ;  $p = 0.041$ ).

There is an indirect influence of motivation with increased work fatigue on the performance of health center employees. Every 1 unit increase in work fatigue in a

person will be followed by a possible decrease in performance of -0.29 units and is statistically significant ( $b = -0.29$ ;  $CI\ 95\% = -0.42\ to\ -0.15$ ;  $p < 0.001$ ).

There is an indirect effect of stress on the performance of health center employees. Every 1 unit increase in stress in a person will be followed by a possible decrease in performance by 0.8 units and is statistically significant ( $b = 0.8$ ;  $CI\ 95\% = 0.70\ to\ 0.95$ ;  $p < 0.001$ ).

The results of path analysis in this study showed a fairly good model suitability, namely ( $p < 0.001$ ,  $RMSEA = 0.08$ ,  $CFI = 0.99$ ,  $TLI = 0.98$ ,  $SRMR = 0.009$ ).

**Table 4. The results of the path analysis are about the factors that affect the performance of health center officers, both direct and indirect effects**

Dependent Variables	Independent Variables	Path coefficient (b)	CI 95%		p
			Lower limit	Upper limit	
<b>Direct influence</b>					
Performance	← Work fatigue	-0.06	0.02	0.12	0.041
	← Motivation	1.14	1.06	1.21	<0.001
<b>Indirect influence</b>					
Work fatigue	← Motivation	-0.29	-0.42	-0.15	<0.001
	← Stress	0.83	0.70	0.95	<0.001

N observation= 202  
 Goodness of fit:  $p < 0.001$ ;  $RMSEA = 0.08$ ;  $CFI = 0.99$   
 $TLI = 0.98$ ;  $SRMR = 0.009$

**DISCUSSION**

**1. Effect of work fatigue on performance**

Based on the results of the analysis, it shows a significant number between work fatigue and employee performance. The results of the researcher's findings can be known that work fatigue has a negative effect on employee performance, this can be known through the data of questionnaire results which show that excessive work, pressure/time urgency but the resulting employee performance is high.

High employee performance is due to the salary provided and a comfortable social

environment so that employees feel at home at work. In line with this study, other studies state that employee salaries also affect performance (Ola, 2019).

Work fatigue is a complex phenomenon caused by biological factors in the work process and is influenced by internal and external factors. The internal factor that influences the occurrence of work fatigue is an inadequate work environment, and the external factor that influences work fatigue is psychosocial problems (Risa, 2024).

## **2. The influence of motivation on performance**

Based on the results of the statistical test, it can be seen that partially all variables have a positive and significant effect on the bound variable. In line with previous study proving that motivation affects performance by Manalu (2021), the conclusion of his study is: based on the criteria for interpreting the determination coefficient, it shows that there is an influence of work motivation and job training on employee performance, this can be seen from the results that show negative values and significant test results can be seen from a p value less than 0.05.

A person's work motivation greatly affects the performance that can be achieved in their work. The behavior of a worker can change because of the changes he or she personally experiences. The relationship between motivation and performance is not always fixed, but will change according to local situations and conditions (Muogbo, 2013).

## **3. Effect of motivation on work fatigue**

Based on the results of the analysis, there is a direct relationship between motivation and work fatigue. This shows that if an employee's work motivation increases, then work fatigue will tend to decrease, and vice versa, if work motivation decreases, it will increase the work fatigue felt by employees.

The motivation factor is one of the factors that plays a role in efforts to minimize the occurrence of work fatigue. Employees' concern and self-awareness in improving their quality are the biggest motivating factors in minimizing the occurrence of work fatigue (Dias et al., 2024).

## **4. Effect of stress on work fatigue**

The results of the study showed that there was an effect of stress on work fatigue. Work stress experienced by an employee can be defined as feedback from the individual himself, both from physiological, psychological and even behavioral reactions to triggers from internal

or external stressors that can be related to any type of work.

Work stress arises due to increased work demands, problems (conflicts), unclarity on the tasks given to employees, and the burden of responsibility that they carry themselves (Amegbor et al., 2020). The impact that arises from the consequences of work stress such as irritability, anxiety symptoms, boredom, sensitive feelings, feelings of tension, and experiencing dissatisfaction from what workers receive. This is in accordance with the results of study conducted by Jameel (2020) that there is a relationship between work stress and work fatigue based on ui chi-square including the relationship of weight.

Work fatigue is a state of declining efficiency and endurance at work. This is in accordance with one of the stress theories that can be applied to work stress, namely the behavioral obstacle theory of Khossy and Kustiawan (2024). This theory is based on the theory put forward by Idaiani (2022) that people feel like they have lost control of the situation that develops at that time which makes them stressed. It is the same with the assumption that the majority of workers who complain that working under pressure is very disturbing because they will experience unpleasant feelings, such as anxiety, tension, loss of enthusiasm, irritability, and emotions so that it can trigger work fatigue (Muogbo, 2013).

## **AUTHOR CONTRIBUTION**

Gilang Pamungkas Ardi Putra as the first author, collected data and processed the data. Hanung Prasetya and Bhisma Murti as supervisors.

## **CONFLICT OF INTEREST**

There is no conflict of interest in this study.

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