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The Influence of Work Motivation and Work Environment on the Productivity of Health Workers at Samaritan Palu Hospital

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ABSTRACT

This study aims to analyze the effect of work motivation and work environment on the productivity of healthcare workers at Rumah Samaritan Palu Hospital. The research employed a quantitative approach using a survey method involving 149 respondents. Data were collected through questionnaires, while data analysis was conducted using multiple linear regression with the assistance of SPSS, including t-test and F-test. The results indicate that partially, work motivation has a significant effect on the productivity of healthcare workers with a t-value of -2.172 and a significance level of 0.031, but it shows a negative relationship. Meanwhile, the work environment has a significant and dominant effect on productivity with a t-value of 22.153 and a significance level of 0.000. Simultaneously, work motivation and work environment have a significant effect on the productivity of healthcare workers with an F-value of 512.703 and a significance level of 0.000. The conclusion of this study reveals that the work environment is the main factor in improving the productivity of healthcare workers, while work motivation needs to be properly managed to avoid negative impacts on productivity.

INTRODUCTION

The productivity of health workers is a key indicator in assessing the success of hospital services, because it is directly related to service quality, operational efficiency, and patient satisfaction levels. Productive health workers are able to provide services quickly, precisely, and professionally, thereby contributing to improving the image and competitiveness of hospitals in the midst of increasingly complex and competitive demands for health services.

In the context of human resource management, the productivity of health workers is inseparable from various factors that affect it, both internal and external. The two main factors that have a strategic role are work motivation. Work motivation is related to an individual's internal drive to perform a task, which affects an individual's enthusiasm, commitment, and responsibility in carrying out his or her duties, while the work environment reflects external conditions that facilitate or hinder performance. According to Robbins and Judge (2020), individual performance is the result of an interaction between motivation, abilities, and job opportunities available in the organization. Health workers with high work motivation tend to show more optimal performance, discipline, and are able to deal with work pressure better. On the contrary, low motivation can lead to decreased performance, work burnout, and reduced productivity (Ramadhanu, 2018; Ramadhannisa, 2024).

However, in practice, the relationship between work motivation and productivity is not always linear. Under certain conditions, high motivation can actually cause work pressure that has a negative impact on productivity. On the contrary, a conducive work environment has consistently been proven to be able to improve the performance and work efficiency of health workers.

In addition to motivation, the work environment also has a significant influence on the productivity of health workers. A conducive work environment from both physical and non-physical aspects can create a sense of comfort, security, and support work effectiveness. Factors such as work facilities, employee relationships, leadership, and organizational culture play a role in shaping a productive work atmosphere. A good work environment has been proven to be able to increase performance, job satisfaction, and productivity, while a less

supportive work environment can trigger work stress, reduce performance, and even increase the turnover rate of health workers (Afandi, 2018; Sedarmayanti, 2017).

A number of empirical studies show that work motivation and work environment simultaneously or partially have a significant influence on the productivity of health workers. Nevertheless, most of the research still focuses on large hospitals or teaching hospitals in major urban areas. Research examining class C hospitals, especially in Eastern Indonesia, is still relatively limited. In fact, class C hospitals have their own characteristics and challenges, such as limited resources, fluctuations in workload, and demands to maintain service quality.

Samaritan Hospital Palu as one of the class C hospitals in Palu City faces complex dynamics in the management of health workers. The challenges faced include fluctuations in the number of patients, limitations of certain health workers, and the need for services that last for 24 hours. In addition, post-pandemic, health workers are required to adapt to changes in work procedures, the use of health information technology, and stricter safety standards. This condition has the potential to affect work motivation and perception of the work environment, which ultimately has an impact on the productivity of health workers.

Therefore, an empirical study is needed that specifically analyzes the influence of work motivation and work environment on the productivity of health workers in the context of class C hospitals in the region. This research is expected to fill the gap in previous research and make a practical contribution to hospital management in formulating strategic policies in the field of human resources.

RESEARCH METHODS

This study uses a quantitative approach with a causal design (explanatory research). The quantitative approach aims to test the relationships between variables through numerical measurement and statistical analysis. According to Sugiyono (2019), quantitative research is used to obtain measurable data and test hypotheses that have been formulated previously. Causal design is used because this study aims to identify the cause-and-effect relationship between independent variables, namely work motivation (X1) and work environment (X2), and dependent variables, namely the productivity of health workers (Y).

The population in this study is all health workers at Samaritan Palu Hospital which totals 238 people, consisting of doctors, nurses, laboratory personnel, midwifery, pharmacy, and radiology. Population is a whole element that has certain characteristics and is the object of research (Handayani, 2020).

The number of samples was determined using the Slovin formula with an error rate of 5%, so that a sample number of 149 respondents was obtained. To ensure the representation of each group of health workers, the proportionate stratified random sampling technique is used, which is proportional sampling based on professional strata. This technique is considered appropriate because the population is heterogeneous (Lohr, 2021; Ahmed, 2024).

Data analysis was carried out with the help of the SPSS version 25 application through the following stages:

Classic Assumption Test
Normality Test: to test whether the data is normally distributed
Multicollinearity test: to ensure that there is no correlation between independent variables (VIF < 10)
Heteroscedasticity Test: to test the similarity of residual variance

Multiple Linear Regression Analysis
Equation models used:
$Y=\alpha+\beta1X1+\beta2X2+eY=\alpha+\beta1X1+\beta2X2+e$
Description: Y = Productivity of health workersX1 = Work motivationX2 = Work environment
α = Constant
β = Regression coefficient = Error
3. Coefficient of Determination (R^2)
Used to measure the ability of independent variables to explain dependent variables.

Hypothesis Test
T test (partial): to find out the influence of each independent variable
F test (simultaneous): to determine the influence of independent variables together

RESULTS

Descriptive Statistical Analysis

The results of the descriptive analysis showed that all research variables were in the high category. The work motivation variable had an average value of 4.19, the work environment of 4.17, and the productivity of health workers of 4.21. The relatively small standard deviation value indicates that the data is homogeneous and representative.

This indicates that in general, health workers have a positive perception of their work motivation, work environment, and productivity levels.

Classic Assumption Test

Normality Test

The normality test was performed to determine whether the residual data in the regression model was normally distributed. The normality test was carried out using the Kolmogorov-Smirnov test through the SPSS program, which can be seen in Table 1 as follows:

Table 1
Normality Test (Kolmogorov-Smirnov)

Variable	Asymp. Sig. (2-tailed)	Remarks
Residual	0,200	Normal

Source: Primary data processed, 2026

The results of the normality test showed a significance value (Asymp. Sig. 2-tailed) of 0.200, where the value was greater than 0.05 or the significance value > 0.05 indicated that the data was normally distributed. Thus, it can be concluded that the residual data is normally distributed, so the regression model meets the assumption of normality and is suitable for multiple linear regression analysis.

The normality test can also be seen in the normal *P-P Plot of Regression Standardized Residual* whether in a regression model, dependent variables and independent variables are distributed normally or not. To detect it, you can look at the distribution of data (dots) on the diagonal axis of the graph spreading around and following the diagonal line.

For clarity, you can see Figure 1 as follows:

Figure 1
Test of Normality Assumptions

Multicollinearity Test

To see whether there is *multicollinearity* in this study, it can be seen through the results of the calculation of *the value of variance inflating* factor (VIF), where if the *value of variance inflating* factor with a tolerance number is close to 1, the data presented does not occur multicollineity. From the results of data processing collected in the field, it shows that the variables analyzed the *value of the inflating* factor and the tolerance number indicate that there is no multicollineity, with a VIF value of 1,000, then the *cut-off* value used to indicate the existence *of multicollineity* is: if the *tolerance* value < 0.10; then multicollineity occurs, but if the *tolerance* value > 0.10; then there is no *multicollinearity*

The results of data processing collected in the field showed that the work motivation variable (X1) with a tolerance value of 0.411 and a VIF value of 2.432, while the work environment variable (X2) with a tolerance value of 0.411 and a VIF value of 2.432, and the productivity variable of health workers (Y) with a tolerance value of 0.411 and a VIF value of 2.432.

The results of *the multicollinearity* test in this study show that no correlation value was found between independent variables, because the value > 0.10, so there is no *multicollinearity,* as seen in Table 2 as follows:

Table 2
Multicollinearity *Test Results*

Colinearity Statistics		
Independent Variables	Tolerance	VIVID
Work Motivation (X1)	0,411	2,432
Work Environment (X2)	0,411	2,432
Productivity of Health Workers (Y)	0,411	2,432

Source: Primary Data After Processing (2026)

Heteroscedasticity Test

This heteroscedasticity *assumption test* was intended to find out whether the *absolute residual variation* was the same *(homoscedasticity)* or unequal *(heteroscedasticity)* for all observations. If this assumption of heteroscedasticity is not met, then the estimator becomes inefficient in both small and large samples and the estimation of the coefficient can be said to be less accurate

For more details, the results of the study can be seen in Figure 2 as follows:

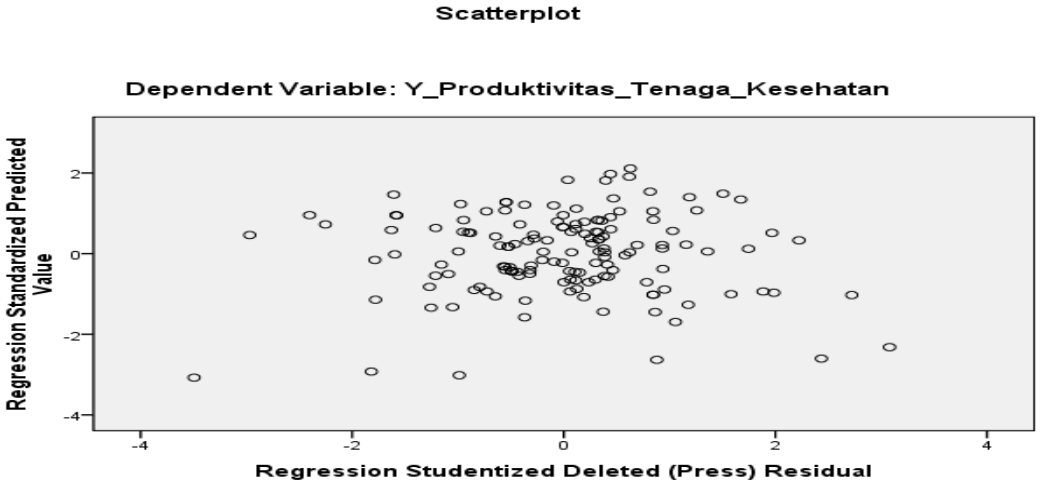

Figure 2
Heteroscedasticity *Assumption Test*

The results of the classical assumption test show that the regression model meets the necessary statistical criteria. Residual data were normally distributed (sig. 0.200 > 0.05), multicollinearity did not occur (VIF value < 10), and no symptoms of heteroscedasticity were found. Thus, the regression model is feasible to use for further analysis.

Multiple Linear Regression Analysis

The regression model obtained in this study is:

$$Y=0.789-0.110X1+0.930X2$$

The results of the analysis showed that the value of the determination coefficient ($R^2 = 0.875$) which means that 87.5% of the variation in the productivity of health workers can be explained by work motivation variables and work environment, while the remaining 12.5% is influenced by other factors outside the research model.

Simultaneous Influence (F Test)

The results of the simultaneous test showed an F-value of 512.703 with a significance of 0.000 (< 0.05). This shows that work motivation and work environment together have a significant effect on the productivity of health workers.

Table 3
ANOVA

Models	Sum of Squares	df	Mean Square	F	Sig.
Regression	16.813	2	8.407	512.703	.000a

Models	Sum of Squares	df	Mean Square	F	Sig.
Residual	2.394	146	0.016		
Total	19.207	148			

Source: Primary data processed, 2026

Based on the anova table mentioned above, showing that the significance value is less than 0.05, it can be concluded that work motivation and work environment simultaneously have a significant effect on the productivity of health workers. Thus, the regression model used in this study was declared feasible and can be used for hypothesis testing.

These findings are in line with organizational behavior theory which states that performance is the result of an interaction between internal factors (motivation) and external factors (work environment).

Partial Influence (t-test)

The Influence of Work Motivation on Productivity

The results showed that work motivation had a significant effect on the productivity of health workers (sig. 0.031 < 0.05), but had a negative direction. These findings suggest that increased work motivation is not always followed by increased productivity. This phenomenon can be explained through the Yerkes-Dodson theory, which states that the relationship between motivation and performance is in the shape of an inverted U-curve. Too high motivation can cause work pressure, stress, and burnout, thereby reducing productivity. In addition, according to Ryan and Deci (2020) in the *theory of Self-Determination*, the dominance of extrinsic motivation that is pressure can have a negative impact on long-term performance.

The Influence of the Work Environment on Productivity

The work environment has been proven to have a positive and significant effect on the productivity of health workers (sig. 0.000 < 0.05) and is the most dominant variable. These findings show that a conducive work environment can improve the comfort, efficiency, and performance of health workers. In the perspective of the Job Demands-Resources (JD-R Model), the work environment is a *job resource* that functions to support performance and reduce workload.

These results are also consistent with previous research that states that a good work environment can increase productivity as well as lower levels of work stress and burnout.

DISCUSSION

The results of this study show that work motivation and work environment have a very important role in increasing the productivity of health workers. Simultaneously, these two variables were shown to have a significant effect on productivity, as shown by the results of the ANOVA test with a significance value of less than 0.05. This indicates that increasing the productivity of health workers cannot be done partially, but must be done through an integrated approach between individual internal factors and external organizational factors. These findings are in line with the theory of organizational behavior put forward by Robbins and Judge (2020), which states that individual performance is the result of an interaction between motivation, ability, and job opportunities. In this context, work motivation reflects an individual's internal drive, while the work environment is a form of external support that allows health workers to work optimally.

Furthermore, the results of this study can also be explained through the Self-Determination Theory developed by Ryan and Deci (2020), which emphasizes that individuals will show the best performance if basic psychological needs such as autonomy, competence, and social connectedness are met. A conducive work environment plays a role in meeting these needs, thereby strengthening the influence of work motivation on productivity. In addition, from the perspective of Job Demands-Resources (JD-R Model), work motivation functions as a personal resource, while the work environment is a job resource that together increases work engagement and productivity of health workers. Thus, the combination of work motivation and the work environment produces synergistic effects that strengthen the performance of health workers.

Empirically, the results of this study are in line with the research of Hidayat and Lestari (2023) which found that work motivation and work environment simultaneously have a significant effect on the productivity of health workers. Similarly, Wulandari et al. (2022) stated that a conducive work environment is able to strengthen the influence of motivation on the performance of medical personnel. Research by Yaghoubi et al. (2021) also shows that motivational factors and organizational environment are the main determinants of health worker productivity. In addition, the Organisation for Economic Co-operation and Development (OECD, 2024) report confirms that the quality of the work environment is an important factor in maintaining the sustainability of health workers' productivity, especially in the post-COVID-19 pandemic period.

Partially, the results of the study show that work motivation has a significant effect on the productivity of health workers, but with a negative relationship direction. These findings show that there is a phenomenon that is not entirely in line with the classical theory that motivation has a positive effect on performance. This phenomenon can be explained by the Yerkes-Dodson theory which states that the relationship between motivation and performance is inverted U-shape. This means that too high motivation can cause excessive work pressure that decreases performance. In the context of health workers, this condition can occur due to high workload, emotional pressure, and high professional demands, so excessive motivation has the potential to cause burnout.

In addition, according to Ryan and Deci (2020), work motivation consists of intrinsic and extrinsic motivations. Excessive extrinsic motivation, such as pressure on work targets and organizational demands, can cause work stress if not balanced with adequate work environment support. This is in line with research by Putra and Wahyuni (2022) which found that in conditions of high workload, work motivation can actually have a negative impact on the performance of health workers. Rahman et al. (2023) also shows that work motivation that is not balanced with good working conditions can increase work stress and decrease productivity. Meanwhile, Sari (2021) stated that high extrinsic motivation can increase the risk of burnout which has an impact on reducing the productivity of health workers.

On the other hand, some studies show different results, where work motivation has a positive influence on productivity. Karaferis et al. (2022) found that work motivation has a significant effect on work involvement and productivity of health workers. Alrawahi et al. (2020) also concluded that intrinsic motivation has a greater contribution to performance than extrinsic motivation. Thus, it can be concluded that the influence of work motivation on productivity is contextual, depending on the type of motivation, working conditions, and organizational support available.

Furthermore, the results of the study show that the work environment has a positive and significant influence on the productivity of health workers, and is the most dominant variable. This shows that the work environment is a strategic factor in increasing the productivity of health workers. According to Robbins and Judge (2020), the work environment includes physical and non-physical aspects that affect the implementation of work. A conducive work environment will create a sense of security, comfort, and increase the efficiency and effectiveness of health workers' work.

In the perspective of the Job Demands-Resources (JD-R Model), the work environment is a job resource that functions to reduce workload, increase motivation, and encourage work engagement. A good work environment will provide the necessary support for health workers to carry out their duties optimally. Conversely, an unconducive work environment can increase work stress and decrease productivity. This is also supported by Herzberg's theory which states that the work environment is a hygiene factor that functions to prevent job dissatisfaction.

Empirically, the results of this study are in line with the research of Lake et al. (2019) which found that a good work environment contributes to improving service quality and work efficiency of health workers. Boudreau et al. (2024) also states that a poor work environment can cause burnout and reduce the productivity of health workers. In addition, Hidayat and Lestari (2023) show that the work environment is the most dominant variable in influencing the productivity of health workers. Pratama and Sari (2021) also found that the work environment has a significant effect on the performance of health workers.

Thus, it can be concluded that the work environment has a very important and dominant role in increasing the productivity of health workers. A good work environment not only increases work comfort, but also encourages motivation, job satisfaction, and the involvement of health workers in work. Therefore, effective work environment management is the main key to increasing the productivity of health workers in a sustainable manner.

Overall, the results show that the productivity of health workers is significantly influenced by a combination of work motivation and work environment. The work environment has a more dominant role than work motivation, which shows that external factors are more decisive in the context of healthcare organizations.

These findings indicate a synergistic effect between work motivation and the work environment. High work motivation will provide optimal results if supported by a conducive work environment. Conversely, without the support of a good work environment, high work motivation can turn into pressure that negatively impacts

CONCLUSION

Work motivation has a significant effect on the productivity of health workers, but shows a negative relationship direction. This indicates that increased work motivation in a given context does not always have a positive impact on productivity. This phenomenon is suspected to be caused by excessive work pressure, the dominance of extrinsic motivation, or an imbalance in motivation management that can trigger burnout.

The work environment has a positive and significant effect and is the most dominant variable in increasing the productivity of health workers. A conducive work environment, both from physical and non-

physical aspects, is able to create comfort, increase work efficiency, and support the optimal performance of health workers.

Simultaneously, work motivation and work environment have a significant effect on the productivity of health workers. This shows that the productivity of health workers is the result of an interaction between internal factors (motivation) and external factors (work environment), so both need to be managed in an integrated manner.

Implications and Recommendations

Hospital management needs to direct work motivation towards intrinsic motivations, such as rewards, recognition, and career development, and avoid excessive work pressure. In addition, proportionate workload management needs to be done to prevent burnout.

The work environment needs to be improved comprehensively, both from physical aspects (facilities, comfort, safety) and non-physical aspects (work relations, communication, and organizational culture), considering its dominant role in increasing productivity.

Organizations need to improve the quality of leadership, supervision, and provide adequate work facilities to support the performance of health workers. Regular monitoring and evaluation are also needed to ensure the effectiveness of the policies implemented.

Subsequent research suggests adding other variables such as leadership, workload, compensation, and job satisfaction, as well as using more diverse methodological approaches such as mixed methods to gain a more comprehensive understanding.

This research makes a theoretical contribution to the development of health human resource management science, as well as a practical contribution to hospital management in formulating strategies to increase the productivity of health workers in a sustainable manner.

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