

# The Effect Of Motivation Work Climate and Leadership on Nurses Productivity at RS Royal Prima Jambi : A Cross-Sectional Study

Tiara Pratiwi<sup>1</sup>, Chrismis Novalinda Ginting<sup>2</sup>, Sri Wahyuni Nasution<sup>3</sup>  
<sup>1,2,3</sup>Kesehatan Masyarakat, Universitas Prima Indonesia, Medan 20118, Indonesia

## ABSTRACT

This study aims to examine the effect of motivation, work climate, and leadership on nurse productivity at RS Royal Prima Jambi. Nurse productivity is essential in maintaining hospital service quality. RS Royal Prima Jambi, a private hospital in Jambi, has experienced a sharp increase in nurse turnover from 9.5% in 2023 to 19.5% in 2024, indicating workforce instability. This quantitative study used a cross-sectional design involving 69 nurses selected through total sampling. Data were collected using questionnaires and analyzed with logistic regression. The results showed that both motivation and work climate significantly influenced nurse productivity ( $p < 0.05$ ), with work climate emerging as the most dominant factor ( $OR = 21.115$ ), followed by motivation ( $OR = 6.231$ ). Leadership, however, did not show a significant direct impact on productivity. These findings highlight the need for hospitals to improve work environments and implement motivational strategies to enhance nurse performance. It is recommended that hospital management invest in leadership development, foster recognition systems, and create supportive work conditions to maintain a productive and stable nursing workforce.

*Keywords: Motivation, Work Climate, Leadership, Productivity, Nurses*

## INTRODUCTION

Nurse productivity is a critical component in determining the overall quality of healthcare services. Globally, the World Health Organization (WHO) reports that poor-quality healthcare contributes to between 5.7 and 8.4 million deaths annually in low- and middle-income countries approximately 15% of all deaths largely due to ineffective, unsafe, and unresponsive care (WHO, 2024). Inadequate nurse performance, high turnover, and lack of motivation are key contributors to these quality gaps, making nurse productivity a global concern in achieving universal health coverage.

In Indonesia, similar challenges persist. Kementerian Kesehatan (2022) states that nurses are the largest group of health workers, and their performance is crucial to the success of hospital services. However, high turnover, burnout, and declining motivation have been widely reported in both public and private hospitals. A national study found that more than 75% of nurses were considered underproductive due to factors such as poor work climate, lack of leadership support, and insufficient motivation (Nurhikma et al., 2018). Nurses make up the largest segment of the healthcare workforce and provide direct patient care, making their productivity essential for patient satisfaction and hospital effectiveness (Kementerian Kesehatan Indonesia, 2022). Poor interaction between healthcare staff and patients is a major driver of dissatisfaction and complaints, highlighting the importance of interpersonal skills and emotional support in nursing care.

These issues are particularly evident at RS Royal Prima Jambi, a Class C private hospital serving the Jambi community. Based on preliminary observation, the hospital has experienced a dramatic rise in nurse turnover—from 9.5% in 2023 to 19.5% in 2024. This alarming rate suggests that nearly one in five nurses left their positions within a single year, placing added pressure on remaining staff and jeopardizing the quality of care. Interviews and early surveys indicate that poor motivation, an unsupportive work environment, and ineffective leadership may be driving these outcomes (Sasmita et al., 2023). This sharp increase in turnover not only disrupts continuity of care but also adds pressure on the remaining nursing staff, increases workload, and can ultimately reduce the quality of patient services. It also implies potential deficiencies in leadership, lack of career development opportunities, and insufficient recognition for performance key elements that directly impact productivity.

Although many studies have evaluated motivation, leadership, and work climate individually, few have investigated their combined impact on nurse productivity in private hospital settings, especially in Jambi. Therefore, this study aims to examine the influence of motivation, work climate, and leadership on nurse productivity at RS Royal Prima Jambi. The results are expected to provide actionable insights to support hospital administrators in creating a more productive and sustainable nursing workforce.

## METHODS

This study employed a quantitative approach with a cross-sectional design. The cross-sectional design involves the simultaneous measurement of various variables across different sample groups at a single point in time. This approach is commonly used in both descriptive and correlational research to illustrate certain conditions or to explain relationships between variables (Widodo et al., 2023). The study was conducted at RS Royal Prima Jambi from April 2025 to May 2025

The population in this study included all nurses assigned to the inpatient wards of RS Royal Prima Jambi, with the inclusion criterion of having worked for more than one month., totaling 69 individuals. A total sampling technique was used, meaning all members of the population were included as respondents.

Data were collected using structured questionnaires that had been tested for validity and reliability. The questionnaire was divided into four sections, each measuring: (1) work motivation, (2) work climate, (3) leadership style, and (4) nurse productivity. Each section used a Likert scale from 1 (strongly disagree) to 4 (strongly agree). The questionnaire used in this study was adopted from the undergraduate thesis of Fitria Aryani Susanti (2014), entitled "*Factors Related to the Work Productivity of Staff Nurses in the Inpatient Wards of Cibinong Regional General Hospital (RSUD Cibinong) in 2014.*" The questionnaire used in this study was adopted from the undergraduate thesis of Fitria Aryani Susanti (2014), entitled "*Factors Related to the Work Productivity of Staff Nurses in the Inpatient Wards of Cibinong Regional General Hospital (RSUD Cibinong) in 2014.*" The instrument had previously been tested for validity and reliability, with results indicating that it was valid and reliable. The Cronbach's alpha value was 0.967, exceeding the threshold of 0.304, which confirms the internal consistency of the instrument.

Data analysis consisted of univariate, bivariate, and multivariate analyses. Univariate analysis was used to describe the distribution of respondent characteristics and study variables. Bivariate analysis involved chi-square tests to determine the association between independent variables (motivation, work climate, leadership) and the dependent variable

(productivity). In this study, variables with a p-value less than 0.25 in the bivariate analysis were included in the multivariate analysis model (Fauziyah, 2020). Multivariate analysis was conducted using binary logistic regression to identify the dominant factors influencing nurse productivity. The decision criterion is that if the p-value is less than 0.05 ( $p < 0.05$ ), the null hypothesis ( $H_0$ ) is rejected, indicating a statistically significant relationship or effect between the two variables. Conversely, if the p-value is equal to or greater than 0.05,  $H_0$  is accepted, meaning there is no statistically significant relationship or effect. Ethical clearance for this study was obtained from the Health Research Ethics Committee of Universitas Prima Indonesia (Ref: 117/EC/FK/UPI/2024).

## RESULTS

Figure 1 shows the univariate distribution of nurse productivity levels. Out of 69 nurses, 57% were categorized as productive, while 43% were less productive.

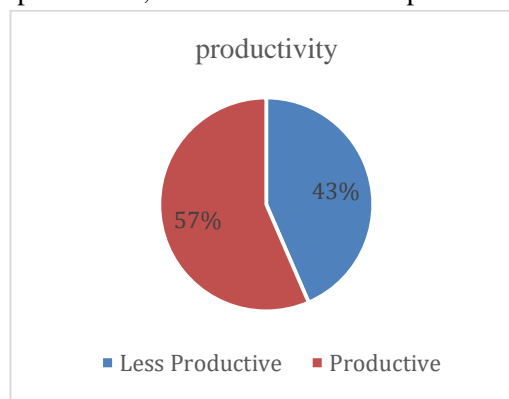


Figure 1. Percentage Diagram of Nurse Productivity

Table 1. Cross tabulation of Work Motivation and Nurse Productivity

| No | Motivation | Nurse Productivity |      |      |      | Total | P value |
|----|------------|--------------------|------|------|------|-------|---------|
|    |            | Good               |      | Poor |      |       |         |
|    |            | n                  | %    | n    | %    |       |         |
| 1  | High       | 32                 | 46,3 | 10   | 14,5 | 42    | 60,8    |
| 2  | Low        | 7                  | 10,2 | 20   | 29,0 | 27    | 39,2    |
|    | Total      | 39                 | 56,5 | 30   | 43,5 | 69    | 100     |

Based on Table 1, the chi-square statistical test, a p-value of  $< 0.001$  was obtained. Since the p-value ( $< 0.001 < 0.05$ ), there is a statistically significant relationship between work motivation and nurse productivity at RS Royal Prima Jambi.

Table 2. Cross tabulation of Work Climate and Nurse Productivity

| No | Work Climate | Nurse Productivity |      |      |      | Total | P value |
|----|--------------|--------------------|------|------|------|-------|---------|
|    |              | Good               |      | Poor |      |       |         |
|    |              | n                  | %    | n    | %    |       |         |
| 1  | Good         | 34                 | 49,3 | 6    | 8,7  | 40    | 58,0    |
| 2  | Poor         | 5                  | 7,2  | 24   | 34,8 | 29    | 42,0    |
|    | Total        | 39                 | 56,5 | 30   | 43,5 | 69    | 100     |

Based on Table 2, the chi-square statistical test, a p-value of  $< 0.001$  was obtained. Since the p-value ( $< 0.001 < 0.05$ ), there is a statistically significant relationship between work climate and nurse productivity at RS Royal Prima Jambi.

**Table 3. Cross tabulation of Leadership and Nurse Productivity**

| No    | Leadership | Nurse Productivity |      |      |      | Total | P value |           |
|-------|------------|--------------------|------|------|------|-------|---------|-----------|
|       |            | Good               |      | Poor |      |       |         |           |
|       |            | n                  | %    | n    | %    |       |         |           |
| 1     | Good       | 35                 | 50,7 | 13   | 18,9 | 48    | 69,6    |           |
| 2     | Poor       | 4                  | 5,8  | 17   | 24,6 | 21    | 30,4    | $< 0,001$ |
| Total |            | 39                 | 56,5 | 30   | 43,5 | 69    | 100     |           |

Based on Table 3, the results of the chi-square statistical test, a p-value of  $< 0.001$  was obtained. Since the p-value ( $< 0.001 < 0.05$ ), this indicates a statistically significant relationship between leadership and nurse productivity at RS Royal Prima Jambi.

**Table 4. Logistic Regression Results**

| No              | Independen Variables | B      | Nilai p   | Exp (B) |
|-----------------|----------------------|--------|-----------|---------|
| 1               | Motivation           | 1,830  | 0,015     | 6,231   |
| 2               | Work Climate         | 3,050  | $< 0,001$ | 21,115  |
| 3               | Leadership           | 0,013  | 0,989     | 1,014   |
| <i>Constant</i> |                      | -2,531 | 0,002     | 0,080   |

## REPORTING RESEARCH RESULTS

The results of the study reveal key insights into how motivation, work climate, and leadership relate to nurse productivity at RS Royal Prima Jambi. The univariate analysis indicated that 43% of nurses were categorized as less productive, while only 57% were considered productive. This finding reflects a need for improved workforce strategies in the hospital. The pie chart in Figure 1 illustrates this distribution.

In the bivariate analysis, motivation and work climate showed statistically significant associations with nurse productivity. Nurses with high motivation levels were significantly more productive than those with lower motivation ( $p = < 0.001$ ). Similarly, a conducive work climate was strongly associated with higher productivity levels ( $p = < 0.001$ ). Leadership shows a significant relationship in the bivariate context ( $p = < 0,001$ ). Based on the results of the bivariate analysis, all variables can be included in the logistic regression test with a p-value  $< 0.25$

Table 4 presents the multivariate analysis results using logistic regression to explain how the independent variables of motivation and work climate with p-values  $< 0.05$  significantly influence nurses' productivity at Royal Prima Jambi Hospital. In contrast, the leadership variable has a p-value  $> 0.05$ , indicating it does not significantly affect nurses' productivity at the same hospital. The multivariate logistic regression further confirmed that work climate was the most influential factor (OR = 21.115), followed by motivation (OR = 6.231). This means that nurses working in a positive work climate were more than 21 times likely to be productive, and those with higher motivation were more than six times likely to demonstrate productivity. Leadership did not reach statistical significance in the regression model ( $p = 0.989$ ), suggesting its influence may be indirect or mediated through other variables.

These findings align with previous literature indicating that environmental and psychological factors significantly impact nursing performance (Sasmita et al., 2023; Pramana, 2020; Wijaya & Manurung, 2019). The data analysis justifies the conclusion that interventions should focus more on work environment improvement and motivational strategies, as well as implementing leadership training.

## DISCUSSION

### **The Effect of Motivation on Nurses Productivity**

The analysis shows that motivation has a positive and significant effect on nurse productivity at Royal Prima Jambi Hospital ( $p < 0.05$ ; OR = 6.231). This finding aligns with Herzberg's theory, which emphasizes the role of intrinsic motivators such as achievement, recognition, and responsibility in enhancing individual performance (Sunyoto & Wagiman, 2023). High motivation encourages nurses to perform optimally, strengthens their loyalty, and increases participation within the organization (Sembiring, 2024).

Work motivation functions as an internal force that drives individuals to act productively, as also explained by Maslow in his hierarchy of needs theory. In the nursing profession, this is particularly important due to the demanding and high-pressure work environment. Dardi et al. (2023) affirm that nurses with strong motivation tend to provide better care, which directly influences their work productivity.

Previous studies by Nurhikmah et al. (2018) and Karmadi (2019) also demonstrate a positive correlation between motivation and nurse productivity. Furthermore, Munawaroh (2019) reported an Odds Ratio (OR) of 7.513, indicating that nurses with higher motivation are significantly more likely to perform well than those with lower motivation. In the hospital context, motivation is not solely influenced by material incentives but also by a supportive work climate, positive interpersonal relationships, and opportunities for personal and professional development. Well-managed motivation fosters nurses who are dedicated, quality-oriented, and capable of working with empathy and responsibility. Therefore, hospital management should consider motivation as an integral part of sustainable human resource development strategies aimed at improving productivity and the overall quality of healthcare services.

### **The Effect of Work Climate on Nurses Productivity**

The study found that work climate has a significant effect on nurse productivity ( $p < 0.001$ ; OR = 21.115). Work climate reflects employees' shared values, norms, and perceptions of their organizational environment, playing a crucial role in shaping work attitudes and behavior. At Royal Prima Jambi Hospital, a supportive work climate evident through managerial support, adequate facilities, and effective communication was associated with higher levels of nurse productivity.

This finding aligns with Stringer's theory, which defines organizational climate as the individual perception of support, reward structures, and organizational practices that influence work behavior. Previous studies (Pramana, 2020; Munthe et al., 2025; Syahputra, 2024) also confirm that a positive work atmosphere enhances motivation, comfort, and performance. Nurses who perceive a supportive environment tend to exhibit stronger collaboration, fewer interpersonal conflicts, and higher-quality service.

The study underscores that creating a healthy work climate is not merely supplementary but a core strategy in human resource management, particularly in healthcare settings. A positive work environment supports not only the psychological and professional well-being of nurses

but also directly impacts service accuracy, speed, and quality. Managerial efforts to improve internal communication, transparency, recognition, and staff participation are therefore essential for sustaining workforce productivity and service excellence.

### **The Effect of Leadership on Nurses Productivity**

This study shows that leadership has a significant relationship with nurse productivity in the bivariate analysis ( $p < 0.001$ ), but it does not have a statistically significant direct effect in the logistic regression analysis ( $p = 0.989$ ). This indicates that leadership plays more of an indirect role, influencing productivity through other variables such as work climate and motivation.

Prayudi et al. (2022) stated that transformational leadership can change awareness and inspire staff without exerting pressure. However, when an authoritarian leadership style is applied, as described in the findings of Amanda (2025), it tends to negatively impact nurse performance due to excessive pressure.

Furthermore, Mose (2020) emphasized that the effectiveness of leadership depends on the presence of a supportive work climate and employees' intrinsic motivation. Therefore, adaptive and communicative leadership styles are essential in creating a positive and productive work environment. The researcher believes that leadership should be positioned as a facilitator rather than the sole determinant of performance. The practical implication of this finding is the importance of implementing regular transformational leadership training for head nurses and nurse managers.

### **CONCLUSION**

This study concludes that nurse productivity at RS Royal Prima Jambi is significantly influenced by both motivation and work climate, with work climate being the most dominant factor. Motivation also plays a substantial role in enhancing work performance. Leadership, however, did not exhibit a statistically significant direct impact on productivity.

To improve nurse productivity, hospital management should focus on fostering a supportive and conducive work environment, and implement strategies that enhance nurse motivation. Interventions such as regular feedback, recognition programs, team-building, and career development pathways may yield substantial improvements in productivity and service quality.

Future studies are recommended to use longitudinal designs, explore mediation effects, and compare results across different types of hospitals to enrich understanding of productivity determinants in healthcare settings.

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