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The Influence Of Work Environment Factors, Employee Motivation And Safety Culture On Patient Safety Performance

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ABSTRACT
Ensuring patient safety is a critical aspect of healthcare services, influenced by various factors, including the work environment, employee motivation, and safety culture. A well-structured work environment, high motivation levels, and a strong safety culture are expected to enhance healthcare workers' performance in maintaining patient safety. However, the extent of these influences needs further investigation. This study aims to analyze the relationship between work environment, work motivation, and safety culture with patient safety performance in a healthcare setting. A quantitative approach was applied using a cross-sectional study design. Data were collected from 165 healthcare workers through a structured questionnaire. The questionnaire did not undergo validity and reliability testing because it was adopted from previously validated and widely used instruments in prior research. Since the questionnaire has already been tested for accuracy and consistency in measuring the intended variables, further validity and reliability assessments were deemed unnecessary. The Spearman correlation test was used to examine the relationship between variables, while ANOVA was conducted to assess the combined influence of the independent variables on patient safety performance. The findings revealed a significant positive correlation between patient satisfaction and healthcare service quality ($p = 0.000$). Similarly, work motivation was significantly correlated with patient safety performance ($p = 0.0$), with respondents consistently rating motivation as good. Safety culture also showed a significant positive correlation with patient safety performance ($p = 0.041$), with a correlation coefficient of 0.065, indicating a moderate relationship. The study concludes that a supportive work environment, high work motivation, and a strong safety culture contribute significantly to patient safety performance.

Keywords: employee motivation; patient safety performance; safety culture; work environment

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INTRODUCTION

The growing public awareness of health is driving demands for improved healthcare services. To address this, maintaining service quality is essential, requiring continuous efforts to identify and rectify weaknesses in healthcare delivery. As expectations for quality healthcare rise, service functions must be enhanced to ensure patient satisfaction. Service quality reflects a patient's assessment of the level of care received compared to their expectations. The better healthcare services meet patient needs and demands, the higher the perceived quality of care (Parasuraman, Zeithaml, & Berry, 1988).Workplace accidents in healthcare settings are a significant concern. According to the International Labour Organization (ILO, 2021), healthcare workers face a high risk of occupational injuries, including needle-stick injuries, musculoskeletal disorders, and exposure to hazardous substances. Hospitals, in particular, are high-risk environments due to the presence of flammable materials, chemicals, and medical gases. A study by Smith et al. (2020) found that nurses are disproportionately affected by workplace accidents, with sprains, strains, and infections being the most common injuries. These findings highlight the need for robust occupational safety and health (OSH) programs in healthcare settings.

Occupational safety and health programs are critical in mitigating risks and improving employee performance. Research by Neal and Griffin (2006) demonstrates that effective OSH programs positively influence employee performance and organizational outcomes. A supportive work environment further enhances productivity and reduces the likelihood of workplace accidents. In hospitals, OSH programs are now a focal point in accreditation evaluations, emphasizing their importance in ensuring patient and staff safety (Maduningtias et al., 2021).Nursing performance is a cornerstone of hospital management, as patient satisfaction largely depends on the quality of nursing care. Failure to meet patient expectations can lead to dissatisfaction with hospital services. During the COVID-19 pandemic, organizational commitment emerged as a key factor influencing nursing performance. A study by Laschinger et al. (2014) found that nurses' commitment to their organization fosters loyalty and a sense of belonging, which are essential for organizational sustainability. At dr. PP Magretti Hospital, nurses' dedication to upholding hospital standards and regulations reflects their commitment to the organization.

To address these challenges, hospitals must prioritize service quality by identifying and addressing shortcomings in healthcare delivery. Patient satisfaction serves as a key metric for evaluating a hospital's ability to meet patient needs. The quality of service provided by healthcare professionals, including dental therapists, directly impacts patient satisfaction and overall care outcomes (Donabedian, 1988).Given this context, this study aims to explore the influence of work environment factors, employee motivation, and safety culture on patient safety performance at dr. PP Magretti Hospital in 2024.

METHOD

Research Design

This study employs a quantitative research approach to examine the influence of independent variables on a dependent variable. The study applies a correlational method to investigate relationships between variables within a specific group or situation. A cross-sectional design is utilized, where data on independent and dependent variables are collected at a single point in time. This design allows for the analysis of how a particular phenomenon (dependent variable) is associated with its potential causes (independent variables).The study population comprises all healthcare workers at RSUD Dr. PP Magretti during February–March 2024, totaling 280 individuals. Due to practical constraints, a sample was selected using the simple random sampling technique, ensuring equal chances of selection without considering hierarchical differences within the population. The sample size was determined using the Krejcie and Morgan table and the Slovin formula, resulting in a sample of 165 respondents.

Variables and Operational Definitions

The study includes two main categories of variables:

1. Independent Variables: These include work environment (X1), employee motivation (X2), and safety culture (X3), which are expected to influence the dependent variable.
2. Dependent Variable: The dependent variable in this study is patient safety performance (Y), which is assumed to be affected by the independent variables.

The operational definitions specify measurable characteristics for each variable, including indicators, measurement tools, data scales, and scoring criteria.Research Instruments and Data Collection Techniques Data collection was conducted using a questionnaire designed to measure the research variables. The questionnaire employs a Likert scale to assess respondents' perceptions, with response options ranging from "strongly disagree" to "strongly agree." This method was chosen for its efficiency in gathering data from a large and geographically dispersed sample.

Data Analysis Techniques

Before conducting the analysis, a normality test using the Kolmogorov-Smirnov test was performed to assess whether the residual data followed a normal distribution. The normality assumption was considered met if the p-value was greater than 0.05. The data analysis involved two main approaches. First, a univariate analysis was conducted to describe the characteristics of each research variable, with categorical data presented in frequencies and percentages. Second, a logistic regression analysis was used to determine the direction and magnitude of the influence of independent variables on the dependent variable.

Data Processing

The data processing stages followed a systematic approach to ensure accuracy and reliability in analyzing research variables. Tabulation involved organizing data into structured tables, while editing ensured completeness and accuracy of questionnaire responses. Coding converted qualitative responses into numerical data for statistical analysis, followed by data entry into SPSS software. Scoring assigned values based on predefined criteria, and transferring compiled data into a master sheet. Finally, cleaning involved reviewing and correcting errors in the dataset. These steps ensured the integrity of the data for further analysis.

RESULT

Table 1 shows that out of 165 respondents, most of the respondents have worked for >15 years (44.2%), namely 73 respondents. The last level of education mostly had the last education DIII diploma III) as many as 88 people (53.3%).

Table 1.
Respondent characteristics (n= 165)

No	Respondent characteristics	f	%
1	Work Experience (years)		
	2-5	13	7.9
	6-10	48	29.1
	11-15	30	18.2
	>15	73	44.2
2	Education		
	High School	13	7.9
	Diploma 3	88	53.3
	Sarjana (S1)	60	36.4
	Magister (S2/spesialist)	4	2.4
	Total	165	100.0

The results of the bivariate analysis, as presented in Table 2, indicate significant correlations between the independent variables and patient safety performance. The work environment variable shows a highly significant relationship, with a p-value of 0.000 and a Spearman correlation coefficient of 0.000. Similarly, work motivation is also significantly correlated with patient safety performance, with a p-value of 0.0 and a correlation coefficient of 0.0, suggesting a constant response pattern among respondents.Additionally, safety culture demonstrates a significant positive correlation with patient safety performance, as indicated by a p-value of 0.041 and a Spearman correlation coefficient of 0.065. Although the correlation coefficient is relatively low, it still falls within a meaningful range, signifying that a stronger safety culture contributes to better patient safety outcomes. These findings reinforce the importance of fostering a supportive work environment, maintaining high motivation levels among healthcare workers, and strengthening safety culture to improve overall patient safety performance.

Tabel 2.
Bivariate Analysis

No	Variable	P-Value	Spearman Correlation
1	Work Environment	0.000	0,000
2	Work Motivation	0.0	0,0
3	Culture Safety	0.041	0,065

DISCUSSION

The Spearman test results reveal a significant p-value of 0.000, indicating a strong positive correlation between patient satisfaction and healthcare service quality. The correlation value remains consistent because all respondents rated the service quality as "very good." Similarly, the relationship between the work environment and patient safety performance was assessed among 165 respondents. The majority (55.2%, n = 91) rated both their work environment and safety performance as "very good," highlighting the importance of a supportive work environment in achieving high safety standards.

The first hypothesis test confirms a significant positive effect of the work environment on organizational commitment. This suggests that a comfortable and conducive work environment at Dr. PP Magretti Hospital strengthens staff commitment to completing their tasks effectively. Conversely, an unfavorable work environment reduces staff commitment. These findings align with previous studies by Caesarianty et al. (2017), who found that a positive work environment enhances employee performance, and by Pupiati (2020) and Arsuta & Mashyuni (2021), who emphasized the role of the work environment in fostering organizational commitment. This study demonstrates that Dr. PP Magretti Hospital has successfully implemented Work Environment Theory, as evidenced by the positive perceptions of its staff.

Field observations reveal that nurses often postpone breaks or skip meals during shifts due to urgent tasks related to patient safety. This reflects the high organizational commitment of employees who prioritize patient care over personal needs. Such dedication is a hallmark of staff with strong organizational commitment. The Spearman test also shows a significant p-value of 0.0, indicating a positive correlation between work motivation and patient safety performance. Among the 165 respondents, 55.2% (n = 91) reported high work motivation and excellent safety performance. This supports the acceptance of the working hypothesis (Ha), confirming a relationship between work motivation and patient safety performance. These findings are consistent with Laksarini (2018), who found that work motivation significantly improves nurses' performance in implementing patient safety protocols ($p < 0.05$). Rahmatika (2019) further emphasizes that motivation is a critical factor influencing individual performance. Neglecting motivation can negatively impact nurses' performance and their attitude toward patient care. This study suggests that nurses with high work motivation tend to perform better, contributing to improved patient safety outcomes.

Additionally, the Spearman test results show a significant p-value of 0.041, indicating a positive correlation between safety culture and patient safety performance. The correlation coefficient of 0.065 falls within the high category, demonstrating a strong relationship between safety culture and patient safety performance ($p = 0.065$; $\alpha = 0.05$). Safety culture is a critical factor in enhancing safe patient care. These findings have implications for hospital leadership, as prioritizing safety culture can mitigate patient risks, improve staff productivity, and ensure reliable healthcare services (Brown & Wolosin, 2013).

To strengthen patient safety culture, nurses' awareness of its importance must be enhanced. Kim et al. (2013) identified factors influencing the perception and practice of patient safety management among hospital employees in Korea. Their study found that factors such as patient interaction, workload, safety education, and the presence of safety management systems significantly affect safety practices. These findings underscore the need for strategies to improve safety culture among healthcare workers. The combined influence of work environment, work motivation, and safety culture on patient safety performance is evident, with a p-value of 0.041 (< 0.05). Aiken et al. (2018) found that a poor work environment—characterized by high workload and lack of support—increases the risk of medical errors. Conversely, a positive work environment enhances safety performance by reducing errors and improving efficiency. Deci & Ryan (2020), in their Self-Determination Theory (SDT), argue that intrinsic and extrinsic motivation, such as job satisfaction and incentives, improve compliance with safety protocols. Singer et al. (2019) further highlight that organizations with a strong safety culture experience fewer adverse events and have more safety-conscious staff. Implementing a robust safety culture, including non-punitive reporting systems and continuous training, can significantly enhance patient safety performance.

CONCLUSION

This study highlights the significant relationship between patient satisfaction, work motivation, safety culture, and work environment with patient safety performance. The findings reveal that patient satisfaction has a strong positive correlation with healthcare service quality, as indicated by a significant p-value of 0.000. This correlation remains constant, as all respondents rated the service as excellent. Similarly, work motivation is also positively correlated with patient safety performance, with a significant p-value of 0.0, showing that respondents consistently rated motivation and safety performance as good.Furthermore, safety culture plays a crucial role in determining patient safety performance. The study found a significant p-value of 0.041, with a correlation coefficient of 0.065, which falls into the high category, indicating a strong and meaningful relationship. Additionally, the ANOVA test results show that the combined influence of work environment, work motivation, and safety culture on patient safety performance is statistically significant, with a p-value of 0.041 (< 0.05). This suggests that a supportive work environment, strong motivation among healthcare workers, and a well-established safety culture contribute to improved patient safety outcomes.

Based on these findings, several recommendations can be made. Educational institutions should integrate knowledge about the work environment, employee motivation, and safety culture into their curricula to prepare future healthcare professionals with the necessary competencies to enhance patient safety. For future researchers, further exploration of these variables and their impact on patient safety performance is encouraged. Expanding the scope of research or incorporating additional influencing factors could provide a more comprehensive understanding of patient safety management.Healthcare institutions should also take proactive steps to improve healthcare workers' awareness and knowledge of the importance of a conducive work environment, motivation, and safety culture. This can be achieved through continuous training programs, strengthening safety protocols, and fostering a supportive workplace atmosphere. Additionally, patients should be encouraged to seek information regarding the quality of healthcare services and the performance of healthcare workers. By being more informed, patients can make better decisions in choosing healthcare facilities and contribute to promoting a culture of patient safety.Through these efforts, all stakeholders, including educational institutions, researchers, healthcare facilities, and patients, can work together to enhance patient safety performance. This collaborative approach will ultimately lead to improved healthcare service quality and better patient outcomes.

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