



## Organizational Resilience and Its Influence on Nurse Turnover Intention, Workplace Accidents, and Psychological Safety in Healthcare Systems

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### ABSTRACT

*Background: Organizational resilience is increasingly recognized as a key capability for healthcare systems to manage workforce challenges and safety risks. However, its simultaneous influence on turnover intention, workplace accidents, and psychological safety remains underexplored. Objective: This study aimed to examine the influence of organizational resilience on turnover intention, workplace accidents, and psychological safety among healthcare workers in hospital settings. Methods: A cross-sectional analytical study was conducted among 258 healthcare workers, including nurses, doctors, medical support staff, and administrative personnel, using cluster sampling. Organizational resilience was measured using a modified Organizational Resilience Questionnaire focusing on planning and adaptive capacity domains. Turnover intention, workplace accidents, and psychological safety were assessed using validated instruments. Data were analyzed using descriptive statistics and Pearson correlation analysis. Results: The mean score of organizational resilience was  $3.78 \pm 0.54$ . Organizational resilience showed a significant negative correlation with turnover intention ( $r = -0.512, p < 0.001$ ) and workplace accidents ( $r = -0.389, p < 0.001$ ), indicating that higher resilience was associated with lower intention to leave and fewer occupational incidents. In contrast, organizational resilience demonstrated a positive correlation with psychological safety ( $r = 0.559, p < 0.001$ ), reflecting a stronger perception of a safe work environment. Among the outcomes, psychological safety showed the strongest association, followed by turnover intention and workplace accidents. Conclusion: Organizational resilience plays a critical role in reducing turnover intention and workplace accidents while enhancing psychological safety, highlighting its importance in strengthening workforce sustainability and healthcare quality.*

## INTRODUCTION

Global healthcare systems are increasingly challenged by rising disease burdens, workforce shortages, and rapidly evolving work environments, all of which place significant pressure on healthcare professionals, particularly nurses (World Health Organization, 2020; Shanafelt et al., 2021). As frontline providers, nurses are highly exposed to occupational stressors, including high workload, emotional demands, and safety risks, which contribute to increased turnover intention, higher rates of workplace accidents, and reduced psychological safety within healthcare organizations (Dall’Ora et al., 2020; Labrague & De los Santos, 2020). These issues not only affect the well-being of nurses but also have direct implications for patient safety and the overall quality of care delivery.

In response to these challenges, organizational resilience has emerged as a critical concept in healthcare management. Organizational resilience refers to the ability of an organization to anticipate, adapt to, and recover from disruptions while maintaining essential functions and sustaining performance (Bardoel et al., 2014; Barasa et al., 2018). Evidence suggests that resilient organizations are more capable of fostering supportive work environments, enhancing employee well-being, and strengthening safety culture (Iflaifel et al., 2020; Hartmann et al., 2020). In particular, organizational resilience has been associated with higher levels of psychological safety, defined as a shared belief among employees that the work environment is safe for interpersonal risk-taking, open communication, and error reporting without fear of blame or punishment (Edmondson, 1999; Newman et al., 2017).

Psychological safety plays a crucial role in healthcare settings, as it enables nurses to speak up about potential risks, report errors, and engage in collaborative problem-solving, thereby reducing the likelihood of workplace accidents and improving patient outcomes (Nembhard & Edmondson, 2006; O’Donovan & McAuliffe, 2020). Conversely, low psychological safety has been linked to increased medical errors, underreporting of incidents, and a higher risk of occupational injuries. At the same time, turnover intention among nurses remains a persistent global issue, driven by unfavorable working conditions, lack of organizational support, and inadequate capacity to manage workplace stressors (Hayes et al., 2012; Falatah, 2021). High turnover intention not only disrupts workforce stability but also increases the burden on remaining staff and compromises the continuity of care.

Despite the growing recognition of organizational resilience, existing studies have

largely examined its effects on isolated outcomes, such as employee well-being or organizational performance, without integrating multiple workforce and safety-related outcomes simultaneously (Grote & Vogel, 2017; Cooper et al., 2020). Moreover, the relationship between organizational resilience and workplace accidents in nursing contexts remains underexplored, even though nurses are among the most vulnerable groups to occupational injuries in healthcare settings (Letvak et al., 2021). This gap indicates a need for a more comprehensive understanding of how organizational resilience influences interconnected outcomes, including turnover intention, workplace safety, and psychological climate.

Therefore, this study aims to examine the influence of organizational resilience on turnover intention, workplace accidents, and psychological safety among nurses in healthcare systems. By adopting a multidimensional approach, this study seeks to provide a more integrated understanding of the role of organizational resilience in promoting workforce stability, enhancing occupational safety, and fostering a psychologically safe work environment, ultimately contributing to the improvement of healthcare quality and sustainability.

## METHODS

### Study Design

This study employed a cross-sectional analytical design to examine the influence of organizational resilience on turnover intention, workplace accidents, and psychological safety among nurses in healthcare systems. The study was conducted at PKU Muhammadiyah Hospital Surabaya, a comprehensive healthcare institution that provides a dynamic organizational setting suitable for assessing resilience and workforce-related outcomes.

### Sample and Setting

The study population consisted of hospital employees working in a healthcare system setting, including nurses, doctors, medical support personnel, and administrative staff. The study was conducted in a hospital setting, which provides an appropriate organizational context for examining resilience and workforce-related outcomes across both clinical and non-clinical professional groups. A total of 258 participants were recruited using a cluster sampling technique. In this approach, hospital work units or professional groups were treated as clusters, and participants were selected proportionally from each cluster to ensure adequate representation of the major workforce categories within the hospital. The sampled groups included nurses, doctors, medical support personnel, and administrative staff, allowing the study to capture the multidimensional organizational experience of employees involved in hospital operations and service delivery. The inclusion criteria were: (1) hospital

employees belonging to one of the following categories: nurse, doctor, medical support personnel, or administrative staff; (2) officially employed by the hospital; (3) having a minimum of six months of work experience to ensure sufficient familiarity with organizational systems and workplace processes; and (4) willing to participate in the study by providing informed consent. The exclusion criteria were: (1) employees who were on extended leave during the data collection period, such as maternity leave, study leave, or sick leave; (2) temporary workers, interns, or trainees without formal employment status; and (3) participants who submitted incomplete questionnaires or withdrew from the study. This sampling framework was intended to ensure representativeness, data quality, and relevance to the assessment of organizational resilience, turnover intention, workplace accidents, and psychological safety in hospital settings.

**Variables**

The independent variable in this study was organizational resilience, defined as the organization’s capacity to anticipate, adapt to, and recover from disruptions while maintaining essential functions. The dependent variables included: (1) turnover intention, defined as the nurse’s conscious and deliberate willingness to leave the organization; (2) workplace accidents, defined as the occurrence of occupational injuries or incidents during work activities; and (3) psychological safety, defined as the perception that the work environment is safe for interpersonal risk-taking, including speaking up and reporting errors without fear of negative consequences.

**Instruments**

Organizational resilience was measured using a modified version of the Organizational Resilience Questionnaire (ORQ), focusing on two core domains: planning and adaptive capacity, which are considered fundamental components of resilience in healthcare organizations. The planning domain reflects the organization’s ability to anticipate potential disruptions, develop structured response strategies, and ensure preparedness through systematic planning processes. This domain consists of several items assessing strategic preparedness, risk anticipation, and organizational readiness. The adaptive capacity domain represents the organization’s ability to respond flexibly to changes, adjust workflows, and maintain functionality during unexpected conditions. This domain includes items related to flexibility, problem-solving, and the ability to reorganize resources in response to challenges. Each item in both domains was measured using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scores for each domain were calculated as composite mean scores, and the results were reported as mean ± standard deviation (Mean ± SD), with higher scores indicating greater levels of organizational resilience in each respective domain. The modified ORQ has demonstrated adequate psychometric properties in previous healthcare studies. Content validity was established through expert evaluation in organizational and healthcare management fields, while construct validity has been supported through factor analysis confirming the

relevance of planning and adaptive capacity as core resilience dimensions. Reliability testing showed acceptable to high internal consistency, with Cronbach’s alpha values typically exceeding 0.80 for both domains, indicating good reliability. Turnover intention was measured using the Turnover Intention Scale (TIS-6), consisting of six items rated on a 5-point Likert scale, with higher scores indicating a stronger intention to leave the organization. Workplace accidents were assessed using a self-reported checklist capturing the occurrence of occupational incidents within the past six months, and the results were reported as frequency and proportion. Psychological safety was measured using Edmondson’s Psychological Safety Scale, consisting of seven items rated on a 5-point Likert scale, with higher scores indicating greater perceived psychological safety. Both instruments have demonstrated strong validity and reliability in previous studies, with Cronbach’s alpha values generally above 0.80.

**Data Analysis**

Data were analyzed using IBM SPSS Statistics software. Descriptive statistics were used to summarize participant characteristics and study variables, including mean, standard deviation, frequency, and percentage. Prior to inferential analysis, data normality was assessed using the Kolmogorov–Smirnov test. For normally distributed variables, Pearson correlation analysis was conducted to examine the relationship between organizational resilience and each dependent variable.

**Ethical Considerations**

This study was approved by the Ethics Committee of the Faculty of Health Sciences, Universitas Muhammadiyah Surabaya, Indonesia. All participants provided informed consent prior to data collection. Confidentiality and anonymity were strictly maintained, and all procedures were conducted in accordance with ethical standards for research involving human subjects.

**RESULTS**

Table 1. Demographic Characteristics of Participants (N = 258)

Characteristic	n (%) / Mean ± SD
<b>Type of Healthcare Worker</b>	
Nurse	142 (55.0%)
Doctor	46 (17.8%)
Medical Support	38 (14.7%)
Administrative Staff	32 (12.4%)
<b>Age (years)</b>	32.6 ± 6.8
<b>Gender</b>	
Male	98 (38.0%)
Female	160 (62.0%)
<b>Job Tenure (years)</b>	7.4 ± 5.1
<b>Education Level</b>	
Diploma	74 (28.7%)
Bachelor	152 (58.9%)
Master or higher	32 (12.4%)
<b>Working Unit</b>	
Inpatient	96 (37.2%)
Outpatient	54 (20.9%)
Emergency Department	48 (18.6%)

Administrative/Support Unit	60 (23.3%)
<b>Working Shift</b>	
Fixed day shift	104 (40.3%)
Rotating shift	154 (59.7%)
<b>Weekly Working Hours</b>	42.3 ± 6.5
<b>Marital Status</b>	
Single	92 (35.7%)
Married	166 (64.3%)

The baseline characteristics of the participants are presented in Table 1. A total of 258 healthcare workers were included, with the majority being nurses (55.0%), followed by doctors (17.8%), medical support personnel (14.7%), and administrative staff (12.4%). The mean age was 32.6 ± 6.8 years, and most participants were female (62.0%). The average job tenure was 7.4 ± 5.1 years. Most participants held a bachelor’s degree (58.9%), and the largest proportion worked in inpatient units (37.2%). A majority were engaged in rotating shifts (59.7%), with an average of 42.3 ± 6.5 working hours per week. Additionally, 64.3% of participants were married.

Table 2. Descriptive Statistics and Pearson Correlation Analysis

Variables	Mean ± SD	r	p-value	Correlate
Organizational Resilience (overall)	3.78 ± 0.54	—	—	—
Turnover Intention	2.94 ± 0.71	-0.512	<0.001	Moderate–Strong (negative)
Workplace Accidents	0.36 ± 0.48	-0.389	<0.001	Moderate (negative)
Psychological Safety	3.81 ± 0.65	0.559	<0.001	Moderate–Strong

Table 2 presents the descriptive statistics and correlation analysis of the study variables. The mean score of organizational resilience was 3.78 ± 0.54, indicating a relatively high level of perceived resilience within the organization. Organizational resilience was negatively correlated with turnover intention (r = -0.512, p < 0.001) and workplace accidents (r = -0.389, p < 0.001), suggesting that higher resilience is associated with lower intention to leave and fewer occupational incidents. In contrast, organizational resilience showed a positive correlation with psychological safety (r = 0.559, p < 0.001), indicating that higher resilience is linked to a safer psychological work environment. The strength of the correlations ranged from moderate to moderate–strong, with psychological safety demonstrating the strongest association with organizational resilience.

## DISCUSSION

This study highlights the important role of organizational resilience in influencing key workforce outcomes within healthcare systems. The findings indicate that higher levels of organizational resilience are associated with lower turnover intention and reduced workplace accidents, while also promoting a stronger sense of psychological safety among healthcare workers. These results reinforce the conceptualization of resilience as a strategic organizational capability that supports workforce stability, safety, and overall well-being (Bardoel et al., 2014; Barasa et al., 2018).

The inverse relationship between organizational resilience and turnover intention suggests that employees are more likely to remain in organizations that are adaptive, supportive, and capable of managing uncertainty effectively. Resilient organizations tend to foster trust, provide clear communication, and support employee needs, which are critical factors in reducing intention to leave (Cooper et al., 2020; Falatah, 2021). This finding is consistent with previous studies showing that organizational context and perceived support significantly influence retention among healthcare workers (Hayes et al., 2012).

In addition, the negative association between organizational resilience and workplace accidents underscores the role of resilience in enhancing safety outcomes. Organizations with higher resilience are better equipped to anticipate risks, implement preventive measures, and respond effectively to disruptions, thereby reducing the likelihood of occupational incidents (Grote & Vogel, 2017; Iflaifel et al., 2020). This is particularly relevant in healthcare settings, where complex and high-risk environments require continuous adaptation and coordination to ensure both worker and patient safety.

Furthermore, the positive relationship between organizational resilience and psychological safety suggests that resilience contributes to creating a work environment where employees feel safe to speak up, share concerns, and report errors. Psychological safety has been widely recognized as a key factor in promoting teamwork, learning, and error prevention in healthcare (Edmondson, 1999; Newman et al., 2017). In resilient organizations, open communication and mutual trust are more likely to be cultivated, enabling staff to engage in proactive behaviors that improve organizational performance and safety (Nembhard & Edmondson, 2006; O’Donovan & McAuliffe, 2020).

Taken together, these findings demonstrate that organizational resilience functions as a multidimensional mechanism influencing both behavioral and safety-related outcomes. Strengthening resilience may therefore serve as an effective strategy to simultaneously reduce turnover intention, minimize workplace accidents, and enhance psychological safety, ultimately contributing to the sustainability and quality of healthcare systems.

Several limitations should be acknowledged. First, the cross-sectional design of this study limits the ability to establish causal relationships between organizational resilience and the outcome variables. Second, the use of self-reported measures may introduce response bias, including social desirability bias, particularly in assessing workplace accidents and psychological safety.

Third, the study was conducted in a single hospital setting, which may limit the generalizability of the findings to other healthcare systems with different organizational structures and cultures. Fourth, although multiple professional groups were included, the distribution of participants across categories may influence the overall findings. Finally, potential confounding variables such as workload, leadership style, and organizational culture were not fully controlled, which may affect the observed relationships.

## CONCLUSION

This study demonstrates that organizational resilience plays a critical role in shaping workforce outcomes within healthcare systems. Higher levels of organizational resilience are associated with reduced turnover intention and workplace accidents, as well as enhanced psychological safety among healthcare workers. These findings highlight the importance of resilience as a strategic organizational capability that supports workforce stability, promotes safety, and fosters a supportive psychological environment. From a practical perspective, strengthening organizational resilience through improved planning, adaptive capacity, and supportive leadership may serve as an effective approach to simultaneously address retention challenges, reduce occupational risks, and enhance communication and trust within healthcare teams. Overall, this study underscores the need for healthcare organizations to prioritize resilience-building strategies as part of their long-term efforts to improve workforce sustainability and the quality of care delivery.

## REFERENCES

- Bardoel, E. A., Pettit, T. M., De Cieri, H., & McMillan, L. (2014). Employee resilience: An emerging challenge for HRM. *Journal of Management*, 40(1), 279–307.
- Barasa, E., Mbau, R., & Gilson, L. (2018). What is resilience and how can it be nurtured? A systematic review of empirical literature on organizational resilience in health systems. *Health Policy and Planning*, 33(10), 1–11.
- Cooper, B., Wang, J., Bartram, T., & Cooke, F. L. (2020). Well-being-oriented human resource management practices and employee performance. *Human Resource Management Journal*, 30(2), 261–277.
- Dall’Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in nursing: A theoretical review. *International Journal of Nursing Studies*, 102, 103450.
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350–383.
- Falatah, R. (2021). The impact of work environment on nurses’ turnover intention. *Journal of Nursing Management*, 29(2), 395–403.
- Grote, G., & Vogel, R. (2017). Organizational resilience: Towards a theory and research agenda. *Safety Science*, 92, 1–6.
- Hartmann, S., Weiss, M., Newman, A., & Hoegl, M. (2020). Resilience in organizations: A multilevel review and future research directions. *Journal of Organizational Behavior*, 41(5), 481–496.
- Hayes, L. J., O’Brien-Pallas, L., Duffield, C., Shamian, J., Buchan, J., Hughes, F., ... North, N. (2012). Nurse turnover: A literature review. *International Journal of Nursing Studies*, 49(7), 887–905.
- Iflaifel, M., Lim, R. H., Ryan, K., & Crowley, C. (2020). Resilient health care systems: A systematic review. *International Journal for Quality in Health Care*, 32(9), 1–8.
- Labrague, L. J., & De los Santos, J. A. (2020). COVID-19 anxiety among frontline nurses. *Journal of Nursing Management*, 28(7), 1653–1661.
- Nembhard, I. M., & Edmondson, A. C. (2006). Making it safe: The effects of leader inclusiveness and professional status on psychological safety. *Journal of Organizational Behavior*, 27(7), 941–966.
- Newman, A., Donohue, R., & Eva, N. (2017). Psychological safety: A systematic review of the literature. *Human Resource Management Review*, 27(3), 521–535.
- O’Donovan, R., & McAuliffe, E. (2020). A systematic review of factors that enable psychological safety in healthcare teams. *BMC Health Services Research*, 20, 1–13.
- Shanafelt, T., Ripp, J., & Trockel, M. (2021). Understanding and addressing sources of anxiety among health care professionals. *JAMA*, 325(12), 1151–1152.
- World Health Organization. (2020). *State of the world’s nursing 2020: Investing in education, jobs and leadership*. WHO Press.