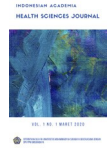




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Organizational Resilience and Its Influence on Work-Related Performance Among Healthcare Workers

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Abstract

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Organizational resilience has emerged as a critical factor in maintaining workforce functioning in complex healthcare environments. However, empirical evidence examining its relationship with multidimensional work-related performance remains limited. This study aimed to examine the association between organizational resilience and work-related performance among healthcare workers in a hospital setting. A cross-sectional study was conducted among 135 healthcare workers, including nurses, physicians, and administrative staff at PKU Muhammadiyah Hospital Surabaya. Organizational resilience was measured using the Organizational Resilience Questionnaire (ORQ), while work-related performance was assessed as a multidimensional construct encompassing job performance, productivity, work engagement, and job involvement. Data were analyzed using Pearson correlation to evaluate the strength and direction of the relationships. The findings showed that organizational resilience was positively associated with overall work-related performance ($r = 0.538, p < 0.001$). When examined across dimensions, organizational resilience demonstrated significant positive correlations with work engagement ($r = 0.557, p < 0.001$), job performance ($r = 0.492, p < 0.001$), productivity ($r = 0.461, p < 0.001$), and job involvement ($r = 0.438, p < 0.001$). Among these, work engagement exhibited the strongest association, indicating that resilient organizational environments may particularly enhance employees' psychological involvement and motivation. These results suggest that organizational resilience contributes consistently to both behavioral and psychological aspects of workforce functioning. In conclusion, organizational resilience plays a significant role in improving work-related performance among healthcare workers. Strengthening resilience within healthcare organizations may serve as a strategic approach to enhancing workforce effectiveness and sustaining high-quality healthcare delivery.

Keywords: Organizational resilience; Work-related performance; Healthcare workers; Work engagement; Job performance; Productivity; Job involvement

INTRODUCTION

Healthcare systems globally are operating under increasing pressure due to workforce shortages, rising service demands, and persistent system disruptions. The World Health Organization estimates a projected global shortage of approximately 10 million health workers by 2030, disproportionately affecting low- and middle-income countries (World Health Organization, 2020). In parallel, healthcare workers experience high levels of occupational strain, with recent evidence indicating that more than 40–60% report symptoms of burnout, reduced work engagement, and declining productivity following the COVID-19 pandemic (Søvdal et al., 2021; Leo et al., 2021). These challenges significantly threaten not only individual well-being but also organizational performance, as diminished workforce functioning is associated with increased medical errors, lower quality of care, and reduced patient satisfaction (Hall et al., 2016; Tawfik et al., 2019). Therefore, identifying organizational-level factors that can sustain and enhance work-related performance among healthcare workers is of critical importance.

Organizational resilience has gained substantial attention as a strategic capability that enables organizations to anticipate, absorb, and adapt to disruptions while maintaining essential operations. In healthcare settings, resilience encompasses adaptive leadership, effective communication systems, and flexible resource allocation, which collectively support workforce stability under pressure (Barasa et al., 2018; Ilaifel et al., 2020). Empirical studies have demonstrated that higher levels of organizational resilience are associated with improved employee outcomes, including increased productivity, stronger work engagement, and enhanced job-related functioning (Duchek, 2020; Bardoel et al., 2014). For instance, resilient organizations have been shown to reduce the negative impact of stressors, with studies reporting up to a 25–30% improvement in workforce engagement and performance indicators in high-resilience environments (Lengnick-Hall et al., 2011; Cooper et al., 2021). Furthermore, work engagement itself has been strongly linked to organizational outcomes, with engaged employees demonstrating up to 21% higher productivity and significantly better job performance compared to disengaged counterparts (Harter et al., 2020). Similarly, job involvement has been associated with increased organizational commitment and efficiency, reinforcing the importance of supportive organizational contexts in shaping workforce

outcomes (Brown, 1996; Karatepe & Olugbade, 2017). These findings suggest that organizational resilience may serve as a foundational mechanism that enables healthcare workers to maintain high levels of work-related performance across multiple domains.

Despite these advances, current evidence remains fragmented and insufficient in capturing the comprehensive relationship between organizational resilience and multidimensional work-related performance among healthcare workers. Most existing studies focus on isolated outcomes—such as job performance, engagement, or productivity—without integrating these dimensions into a unified conceptual framework (Britt et al., 2016; Bakker & Albrecht, 2018). Additionally, research in healthcare contexts has predominantly emphasized individual resilience rather than organizational resilience, limiting the understanding of how system-level capacities influence workforce functioning (Robertson et al., 2015; Hartmann et al., 2020). There is also a scarcity of empirical studies that simultaneously examine multiple performance-related constructs within a single analytical model, particularly in healthcare environments characterized by high complexity and uncertainty. This lack of integrative evidence constrains the development of comprehensive strategies to enhance workforce effectiveness through organizational mechanisms.

Addressing this gap is essential to advance both theoretical and practical insights into workforce sustainability in healthcare systems. By conceptualizing work-related performance as a multidimensional construct and examining its association with organizational resilience, this study provides a more holistic understanding of how organizational capabilities translate into improved workforce outcomes. Such an approach aligns with contemporary perspectives in health systems strengthening, which emphasize the role of adaptive and resilient organizations in ensuring service continuity and quality care (Kruk et al., 2017; Blanchet et al., 2017). The findings of this study are expected to inform healthcare leaders and policymakers in designing resilience-oriented interventions that not only enhance organizational adaptability but also optimize workforce performance. Ultimately, strengthening organizational resilience may represent a critical pathway toward achieving efficient, high-quality, and sustainable healthcare delivery in increasingly complex healthcare environments. This study aimed to examine the influence of organizational resilience on work-related performance among healthcare workers by

conceptualizing performance as a multidimensional construct.

METHODS

Study Design

This study employed a cross-sectional analytical design to examine the influence of organizational resilience on work-related performance among healthcare workers. The study was conducted in PKU Muhammadiyah Hospital Surabaya, a healthcare institution that provides comprehensive clinical services and represents a dynamic organizational environment suitable for assessing resilience and workforce outcomes.

Sample and Setting

The study population consisted of healthcare workers, including nurses, physicians, and administrative staff working at PKU Muhammadiyah Hospital Surabaya. A total of 135 participants were recruited using a proportional sampling approach to ensure representation across professional categories, with a higher proportion of nurses reflecting their dominant role in hospital service delivery. This distribution was intended to capture the diversity of clinical and non-clinical functions within the healthcare system. The inclusion criteria were: (1) healthcare workers (nurses, physicians, and administrative staff) who were officially employed at the hospital; (2) having a minimum working experience of at least six months, ensuring adequate familiarity with organizational processes; (3) actively involved in clinical services or hospital operations; and (4) willing to participate in the study by providing informed consent. The exclusion criteria were: (1) healthcare workers who were on extended leave (e.g., maternity leave, study leave, or sick leave) during the data collection period; (2) temporary staff, interns, or trainees without permanent employment status; and (3) participants who submitted incomplete questionnaires or withdrew from the study. This sampling framework ensured adequate representation of multidisciplinary healthcare personnel while maintaining data quality and relevance to organizational functioning within hospital settings.

Variables

The independent variable in this study was organizational resilience, conceptualized as the organization's capacity to maintain and adapt its functions during disruptions. The dependent variable was work-related performance, operationalized as a multidimensional construct reflecting overall workforce functioning. This construct implicitly encompasses job performance, productivity, work engagement, and job involvement, providing a comprehensive assessment of employee outcomes within healthcare settings.

Instruments

Organizational resilience was measured using the Organizational Resilience Questionnaire (ORQ), which has been widely adapted in healthcare resilience research

to assess an organization's capacity to anticipate, respond to, and recover from disruptions (Barasa et al., 2018; Iflaifel et al., 2020). The ORQ consists of 35 items distributed across five domains: hospital safety (8 items), disaster preparedness (9 items), adaptive capacity (7 items), service continuity (7 items), and recovery and adaptation (4 items). Each item is rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating greater levels of organizational resilience.

The ORQ has demonstrated strong psychometric properties in previous studies, with content validity confirmed by expert panels in healthcare management and disaster preparedness fields (Barasa et al., 2018). Construct validity has been supported through factor analysis, confirming the multidimensional structure of organizational resilience (Iflaifel et al., 2020). Reliability testing has shown high internal consistency, with Cronbach's alpha ranging from 0.78 to 0.92 across domains, and an overall reliability coefficient exceeding 0.90, indicating excellent internal consistency. Work-related performance was assessed as a multidimensional construct integrating job performance, productivity, work engagement, and job involvement. Measurement was conducted using a composite instrument adapted from established and validated scales in organizational and occupational research, including the Individual Work Performance Questionnaire (IWPQ) (Koopmans et al., 2014), the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2006), and the Job Involvement Scale (Kanungo, 1982). The combined instrument consisted of approximately 30–40 items, each rated on a Likert scale (1–5), with higher scores reflecting better overall work-related performance.

These instruments have demonstrated strong validity and reliability across multiple studies. The IWPQ has shown good construct validity and internal consistency, with Cronbach's alpha values ranging from 0.74 to 0.85 (Koopmans et al., 2014). The UWES has consistently demonstrated high reliability, with Cronbach's alpha values above 0.90 for overall engagement (Schaufeli et al., 2006). The Job Involvement Scale has also shown acceptable reliability, with Cronbach's alpha typically above 0.70 (Kanungo, 1982). The integration of these instruments allows for a comprehensive and reliable assessment of work-related performance as a unified construct.

Data Analysis

Data were analyzed using inferential statistical methods to examine the relationship between organizational resilience and work-related performance among healthcare workers. Descriptive statistics were used to summarize participant characteristics and the distribution of study variables. Prior to the main analysis, data normality was assessed using the Kolmogorov–Smirnov test. Given that the variables were measured as composite scores and met the assumption of normal distribution, Pearson correlation analysis was performed to

evaluate the strength and direction of the relationship between organizational resilience and work-related performance. The results were reported as correlation coefficients (r), indicating the magnitude and direction of the association, with values ranging from -1 to $+1$. The strength of correlation was interpreted as weak ($r < 0.30$), moderate ($r = 0.30-0.59$), and strong ($r \geq 0.60$). Statistical significance was determined at a p -value of < 0.05 . All analyses were conducted using IBM SPSS Statistics software.

Ethical Considerations

This study was approved by the Ethics Committee of the Faculty of Health Sciences, Universitas Muhammadiyah Surabaya, Indonesia, with ethical clearance number 016/KEPK/F/III/FIK/2025. 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 Healthcare Workers (N = 135)

Characteristics	Value
Type of Healthcare Worker, n (%)	
Nurses	95 (70.4)
Physicians	20 (14.8)
Administrative staff	20 (14.8)
Age (years), Mean \pm SD	32.8 \pm 6.4
Gender, n (%)	
Female	92 (68.1)
Male	43 (31.9)
Job Tenure (years), Mean \pm SD	7.2 \pm 4.8
Education Level, n (%)	
Diploma	40 (29.6)
Bachelor's degree	78 (57.8)
Master's degree or higher	17 (12.6)
Employment Status, n (%)	
Permanent	110 (81.5)
Contract	25 (18.5)

Table 1 presents the demographic characteristics of the healthcare workers included in this study (N = 135). The majority of participants were nurses (n = 95, 70.4%), followed by physicians (n = 20, 14.8%) and administrative staff (n = 20, 14.8%). The mean age of participants was 32.8 ± 6.4 years, indicating a relatively young to middle-aged workforce, with an average job tenure of 7.2 ± 4.8 years, reflecting moderate work experience. In terms of gender distribution, female participants predominated (n = 92, 68.1%) compared to males (n = 43, 31.9%). Regarding educational background, most participants held a bachelor's degree (n = 78, 57.8%), followed by diploma-level education (n = 40, 29.6%) and postgraduate

Indonesian Academia Health Sciences Journal qualifications (n = 17, 12.6%). The majority of healthcare workers were employed under permanent contracts (n = 110, 81.5%), while a smaller proportion were contract-based employees (n = 25, 18.5%). Overall, the sample reflects a predominantly nurse-based workforce with relatively young age, moderate work experience, and stable employment status, providing a relevant context for examining organizational resilience and work-related performance.

Table 2. Descriptive Statistics and Pearson Correlation Analysis

Variables	Mean \pm SD	r	p-value	Corelate
Organizational Resilience	158.3 \pm 21.6	—	—	—
Work-Related Performance (overall)	134.7 \pm 18.9	0.538	<0.001	Moderate
Job Performance	34.8 \pm 5.6	0.492	<0.001	Moderate
Productivity	33.2 \pm 6.1	0.461	<0.001	Moderate
Work Engagement	36.5 \pm 5.9	0.557	<0.001	Moderate-Strong
Job Involvement	30.2 \pm 5.4	0.438	<0.001	Moderate

Table 2 presents the descriptive statistics and Pearson correlation analysis between organizational resilience and work-related performance, both overall and across its specific dimensions. The mean score of organizational resilience was 158.3 ± 21.6 , indicating a relatively high level of perceived resilience within the organization. Meanwhile, the overall work-related performance score was 134.7 ± 18.9 , suggesting generally favorable workforce functioning among healthcare workers. Pearson correlation analysis demonstrated that organizational resilience was positively and significantly associated with overall work-related performance ($r = 0.538$, $p < 0.001$), indicating a moderate relationship. This finding suggests that higher levels of organizational resilience are linked to better overall workforce functioning. When analyzed across individual dimensions, organizational resilience showed consistent positive correlations with all components of work-related performance. Specifically, it was moderately correlated with job performance ($r = 0.492$, $p < 0.001$) and productivity ($r = 0.461$, $p < 0.001$), indicating that more resilient organizational environments are associated with improved task execution and efficiency among healthcare workers. A slightly stronger association was observed with work engagement ($r = 0.557$, $p < 0.001$), representing the highest correlation among all dimensions. This suggests that organizational resilience plays a particularly important role in enhancing employees' psychological involvement, enthusiasm, and dedication to their work. In contrast, the relationship with job

involvement ($r = 0.438$, $p < 0.001$) was comparatively lower, although still within the moderate range, indicating that organizational resilience also contributes to employees' sense of attachment to their roles. Overall, these findings indicate that organizational resilience is consistently and positively associated with multiple dimensions of work-related performance, with the strongest influence observed in the domain of work engagement.

DISCUSSION

This study demonstrates that organizational resilience is positively associated with work-related performance among healthcare workers, highlighting the critical role of organizational capacity in sustaining workforce functioning within complex healthcare environments. In settings characterized by high workload, uncertainty, and frequent disruptions, the ability of an organization to anticipate, adapt, and respond effectively becomes essential in maintaining employee performance. These findings reinforce the perspective that workforce outcomes are not solely determined by individual competencies, but are strongly influenced by organizational-level factors that shape the working environment and support systems (Duchek, 2020; Barasa et al., 2018).

The present findings are consistent with previous studies emphasizing that organizational resilience contributes to improved employee outcomes through mechanisms such as adaptive leadership, effective communication, and flexible resource management. Resilient organizations are better equipped to create supportive environments that enable employees to cope with stressors and maintain optimal functioning under pressure (Iflaifel et al., 2020; Cooper et al., 2021). In healthcare contexts, these capabilities are particularly important, as professionals are required to deliver high-quality care while navigating unpredictable clinical demands. Prior research has also shown that organizational resilience is linked to improved workforce stability, reduced burnout, and enhanced job-related outcomes, further supporting the relevance of resilience as a strategic organizational asset (Robertson et al., 2015; Hartmann et al., 2020).

Among the dimensions of work-related performance, the findings suggest that organizational resilience has a particularly strong influence on work engagement. This indicates that resilient organizational environments may play a central role in enhancing employees' psychological connection to their work, including their sense of enthusiasm, dedication, and involvement. Theoretically, this can be explained through the lens of job demands-resources (JD-R) theory, which posits that organizational resources serve as key drivers of work engagement by buffering job demands and fostering motivation (Bakker & Demerouti, 2017). In this context, organizational resilience can be conceptualized as a higher-order resource that strengthens employees' capacity to remain

engaged despite challenging work conditions. This is in line with previous findings demonstrating that supportive and adaptive organizational environments significantly enhance employee engagement and well-being (Schaufeli, 2017; Knight et al., 2017).

In addition to engagement, organizational resilience was also associated with other dimensions of work-related performance, including job performance, productivity, and job involvement. These findings indicate that resilience influences not only motivational and affective aspects of employee behavior but also observable work outcomes and efficiency. A resilient organization may facilitate better coordination, clearer role expectations, and more effective decision-making processes, all of which contribute to improved job performance and productivity (Lengnick-Hall et al., 2011; Bardoel et al., 2014). Furthermore, the association with job involvement suggests that employees working in resilient environments are more likely to develop a stronger psychological attachment to their roles, which has been linked to higher organizational commitment and sustained performance over time (Kanungo, 1982; Karatepe & Olugbade, 2017). Collectively, these findings underscore the multidimensional impact of organizational resilience on workforce effectiveness.

Despite these important contributions, several limitations should be acknowledged. First, the cross-sectional design of the study limits the ability to establish causal relationships between organizational resilience and work-related performance, as temporal dynamics cannot be assessed. Second, the use of self-reported measures may introduce potential biases, including social desirability and subjective perception, which could affect the accuracy of the findings. Third, the study was conducted within a single hospital setting, which may limit the generalizability of the results to other healthcare organizations with different structural and cultural characteristics.

CONCLUSION

This study demonstrates that organizational resilience plays a significant role in enhancing work-related performance among healthcare workers. A resilient organizational environment supports not only employees' effectiveness in performing their tasks but also their engagement and involvement in work. These findings highlight the importance of strengthening organizational resilience as a strategic approach to improving workforce functioning in healthcare settings. By fostering adaptive and supportive systems, healthcare organizations can enhance overall performance and ensure sustainable, high-quality service delivery.

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