Volume 4, Issue 3, 2026

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

IMPACT OF ORGANIZATIONAL SUPPORT ON BURNOUT AND PATIENT SAFETY: EVIDENCE FROM TERTIARY HEALTHCARE SETTINGS IN KARACHI

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DOI: https://doi.org/10.5281/zenodo.21368720

Keywords
Organizational support; burnout; patient safety culture.

Article History
Received: 30 January 2026
Accepted: 15 March 2026
Published: 31 March 2026

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Abstract

Background: *The safety of patients is one of the core indicators of health care service quality, especially in situations where there is insufficient health care resource availability. Healthcare provider burnout is an important predictor of patient safety outcomes. Perceived organizational support may be instrumental in promoting patient safety culture by minimizing the effects of burnout. Objectives: To determine the association between perceived organizational support, burnout, and patient safety culture and evaluate the role of burnout as a mediator in tertiary health care institutions in Karachi, Pakistan.*

Methodology: *A cross-sectional analytical study was carried out among 110 health care providers, consisting of physicians, nurses, and allied health personnel in tertiary health care facilities in Karachi, Pakistan, using a convenience sampling method. Data were collected using standardized instruments, which include the Survey of Perceived Organizational Support, Maslach Burnout Inventory, and Hospital Survey on Patient Safety Culture scales. Descriptive statistics, Pearson correlation, multiple linear regression, and mediation analysis with Hayes' PROCESS macro (Model 4) using 5,000 bootstrap samples were used for data analysis.*

Results: *Respondents perceived moderate organizational support (3.99 ± 0.61), burnout (3.21 ± 0.68), and patient safety culture (3.67 ± 0.57). The organizational support scale exhibited a negative relationship with the burnout scale ($r = -0.52$, $p < 0.01$), while a positive relationship with the patient safety culture scale ($r = 0.61$, $p < 0.01$) was found. Moreover, the burnout scale correlated negatively with the patient safety scale ($r = -0.58$, $p < 0.01$). Organizational support ($\beta = 0.43$, $p < 0.001$) and burnout ($\beta = -0.39$, $p < 0.001$) were significant predictors of patient safety culture ($R^2 = 0.50$). Mediation analysis confirmed partial mediation of burnout in the association*

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

between organizational support and patient safety culture.

Conclusion: *Organizational support perceptions have a significant impact on patient safety culture both directly and indirectly through burnout.*

Introduction

Patient safety, which involves preventing any harm to patients when providing healthcare services, is a crucial element of any quality healthcare system. Even though there have been global efforts in recent years, preventable medical errors continue to be an issue, especially in low- and middle-income nations where healthcare systems lack sufficient resources [1]. The emergence of professional burnout has been identified as a crucial determinant of patient safety results. Professional burnout entails emotional exhaustion, dehumanization, and low personal fulfillment [2]. Literature indicates a strong link between professional burnout and an increase in medical errors, low-quality healthcare service provision, and poor patient outcomes [3,4]. For example, one study indicated that professional burnout leads to diagnostic mistakes and poor clinical performance, while another meta-analysis by Smiderle et al. [5,6] established a statistically significant relationship between professional burnout and poor patient safety. Perceived organizational support (POS) refers to the extent to which healthcare employees feel valued and cared for by their organizations. Evidence shows that burnout can be reduced by increasing POS [7,8].

Additionally, organizational support has been related to patient safety culture. As Seo and Lee [9] have shown, organizational support positively influences safety through increased compliance; similarly, Yuniati et al. [10] showed that greater POS results in fewer adverse events. Healthcare workers in Pakistan, especially in Karachi, suffer from high workload and staffing shortages, which may influence patient safety culture [11]. Nevertheless, there is insufficient literature on the relationship between organizational support, burnout, and patient safety culture in Karachi. The current research focuses on investigating the impact of organizational support on burnout, the impact of burnout on patient safety culture, and the mediating effect of burnout between organizational support and patient safety culture.

Methodology

In this research, a quantitative cross-sectional study design was applied to analyze the relationship among perceived organizational support, burnout, and patient safety culture of health care professionals. The study took place during six months from September 2025 to February 2026 and was carried out at several public and private tertiary care hospitals based in Karachi, Pakistan. Health care professionals such as physicians, nurses, and allied health professionals involved in providing treatment to patients comprised the study population. The sample size for the study was 110 participants chosen by applying a non-probability proportional convenience sampling method. This sampling technique was preferred, considering the practicality associated with carrying out the research within busy hospital settings. In order to provide participants with sufficient exposure, they were selected based on having at least one year of clinical experience. Those working in administrative positions and those who were trainees or interns for less than one year were not included to ensure that the research remained centered around the frontline medical workers. Data collection was done using a questionnaire that was structured and self-administered questionnaire. Perceived organizational support was determined by the use of the Survey of Perceived Organizational Support (SPOS). This test had 8 items to determine how the respondents perceived whether or not their organizations appreciated their worthiness and well-being. The MBI (Maslach Burnout Inventory) was used to assess burnout. Perceived organizational culture for patient safety was measured through the administration of the abbreviated version of the Hospital Survey on Patient Safety Culture (HSOPSC). This survey tool is developed by the Agency for Healthcare

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

Research and Quality (AHRQ) and measures perceptions associated with safe practice, error reporting, and organizational learning. Demographic information such as age, sex, professional background, and years of clinical experience was collected to describe the demographics of the study population. The IRB approval from the participating institutions was sought before conducting the research. Participants were briefed about the objectives of the study, and their written consent was obtained before collecting data. Confidentiality and anonymity were strictly maintained during data collection. The right for participants to drop out of the research at any time during their participation in the study without any consequences was provided. Data collection and analysis were performed using SPSS software version 28. Measures of central tendency, such as means, standard deviation, frequency, and percentage, were calculated. In addition, the association among organizational support, burnout, and patient safety culture was determined by using the Pearson correlation analysis approach. Multiple regression was used to examine the effect of organizational support and burnout on patient safety culture and determine their predictive value. Further, mediation analysis was done using the Hayes PROCESS Macro approach (model 4) by doing bootstrapping for 5,000 iterations to determine the mediating role of burnout in the association between organizational support and patient safety culture. The threshold of significance adopted was $p<0.05$.

Results

Demographic Characteristics of Participants:

A total of 110 healthcare professionals were involved in the study (see table-1). The sampling involved physicians, nurses, and allied healthcare professionals working in tertiary care hospitals in Karachi. Female healthcare professionals accounted for 56.4% of the sampling population, a trend that is often associated with healthcare professionals, especially nurses. A significant proportion of healthcare professionals in the sampling population belonged to the age group of 20 to 30 years (41.8%), demonstrating that the age of the respondents was relatively young. The highest number of healthcare professionals who participated in the survey was nurses at 49.1%, followed by physicians and allied healthcare professionals. Most healthcare professionals sampled had one to five years of experience (40%).

Table-1

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	48	43.6
	Female	62	56.4
Age Group	20–30 years	46	41.8
	31 to 40 years	38	34.5
	41 to 50 years	18	16.4
	>50 years	8	7.3
Profession	Physicians	32	29.1
	Nurses	54	49.1
	Allied Staff	24	21.8
Working Experience	1 to 5 years	44	40.0
	6 to 10 years	36	32.7
	11 to 15 years	18	16.4

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Variable	Category	Frequency (n)	Percentage (%)
	>15 years	12	10.9

Descriptive Statistics:

Based on the descriptive statistics (see Table 2), it appears that the participants rated their perception of organizational support quite highly. They also had moderately high burnout levels. On the other hand, the patients' safety was perceived positively by most individuals.

Table-2

Variable	Mean	SD
Organizational Support	3.99	0.61
Burnout	3.21	0.68
Patient Safety Culture	3.67	0.57

Correlation Analysis:

Pearson correlation analysis was conducted to find the relationships among study variables (see table-3). Organizational support had a negative correlation with burnout (r = –0.52). This means that organizational support is negatively related to burnout levels, in that high organizational support leads to low burnout levels. Patient safety culture had a negative correlation with burnout (r = –0.58). Thus, a high burnout level leads to poor safety results. Organizational support and patient safety culture were positively correlated (r = 0.61). Note: $p < 0.01$

Table-3

Variables	1	2	3
1. Organizational Support	1		
2. Burnout	-0.52**	1	
3. Patient Safety	0.61**	-0.58**	1

Chart: 1 Correlation, Organizational Support vs Patient Safety

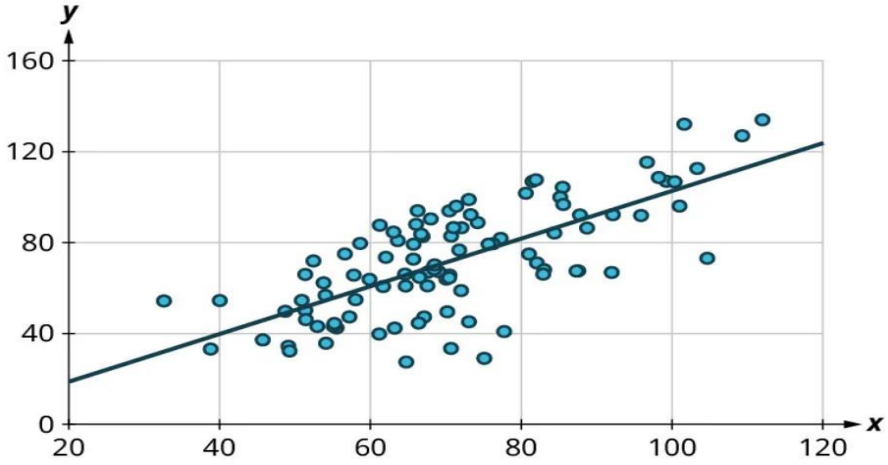
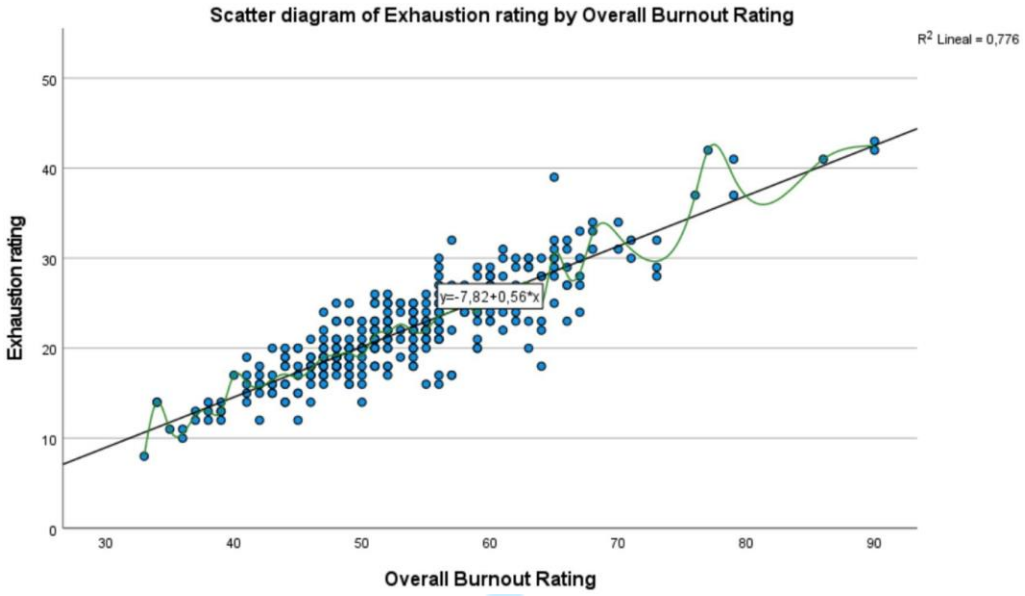


Chart-2 Overall Burnout Rating

Volume 4, Issue 3, 2026

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593



Multiple Linear Regression Analysis

A multiple linear regression analysis was carried out to examine the effect of organizational support and burnout on patient safety culture (see table-4)

This model accounts for 50% of the variance in patient safety culture, showing a significant predictive power and goodness of fit in behavioral studies.

Table-4

R	R^2	Adjusted R^2	Std. Error
0.71	0.50	0.49	0.41

ANOVA Results

The statistically significant regression model showed ($F = 54.73$, $p < 0.001$), confirming that the predictors jointly influence patient safety culture (see table-5)

Table-5

Source	SS	df	MS	F	p-value
Regression	18.42	2	9.21	54.73	<0.001
Residual	18.39	107	0.17		
Total	36.81	109			

Coefficients

Organizational support has a significant positive effect on patient safety culture, Burnout has a significant negative effect, and both predictors independently contribute to explaining patient safety outcomes (see table-6)

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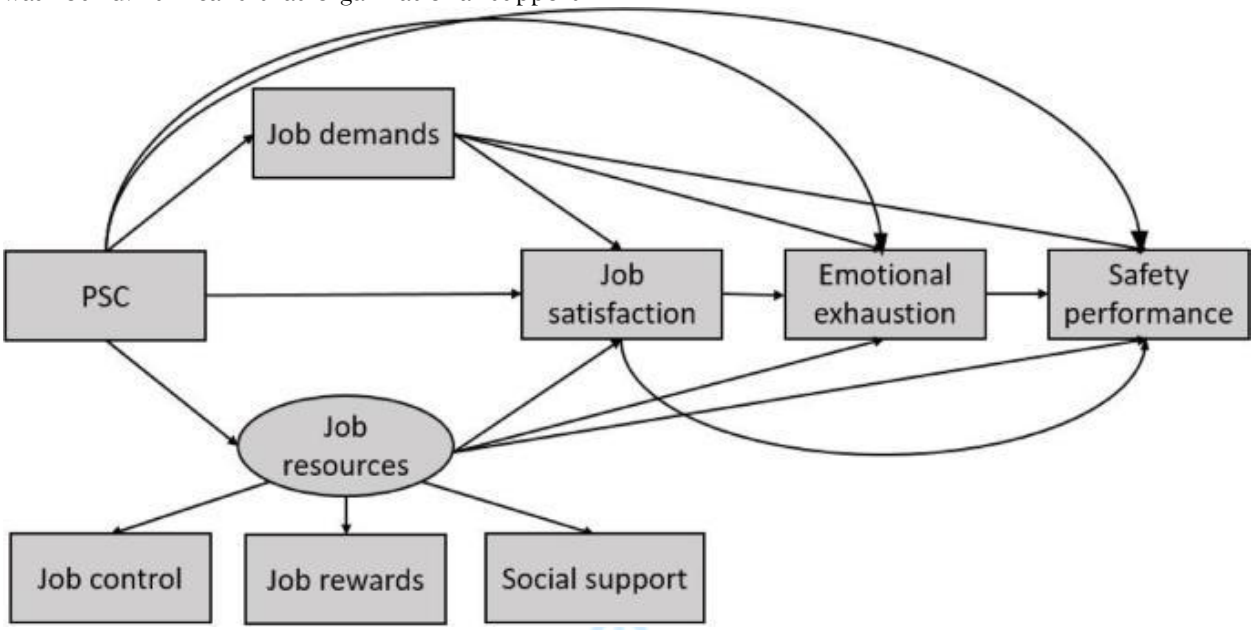
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Table-6

Predictor	β	t	p-value
Organizational Support	0.43	6.12	<0.001
Burnout	-0.39	-5.48	<0.001

Mediation Analysis:

A partial mediating role of burnout between organizational support and patient safety culture was found. It means that organizational support influences the safety of patients not only directly but also indirectly through the reduction of burnout.



Hypothesis Testing

Hypothesis	Statement	Result
H1	Organizational support reduces burnout	Supported
H2	Burnout negatively affects patient safety	Supported
H3	Organizational support positively affects patient safety	Supported

Summary of Findings:

Perceived organizational support strongly improves patient safety

Burnout strongly diminishes patient safety

Perceived organizational support also diminishes burnout

The model shows very high explanatory strength ($R^2 = 0.50$)

Discussion

The current study aimed to explore the effect of perceived organizational support on burnout and patient safety culture amongst healthcare providers working in tertiary care organizations of Karachi city. It is evident from the study findings that perceived organizational support has a strong role in decreasing burnout and promoting patient safety culture. This negative relationship between perceived organizational support and burnout was well supported by the available literature. Past studies revealed that workers who have positive perceptions about organizational support suffer from lower degrees of emotional and psychological exhaustion. This reinforces the

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ISSN: (e) 3007-1607 (p) 3007-1593

theoretical underpinning of the JD-R model, whereby resources, like organizational support, can help offset the negative impact of job demands and lower burnout. Moreover, there was found to be a statistically significant negative correlation between burnout and patient safety culture. This is consistent with the existing literature, where it has been demonstrated that burnout among healthcare workers has been a contributing factor to medical errors, decreased quality of care, and poor patient outcomes [1,2]. Nishimura stressed that burnout is highly correlated with clinical incompetence, whereas Smiderle et al. [2], using a meta-analysis, confirmed the impact of burnout on patient safety. Therefore, it appears imperative that the problem of burnout should be addressed in the context of healthcare improvement. Finally, the positive correlation between organizational support and patient safety culture was also corroborated by the results of the reviewed literature. Namely, Seo & Lee [4] have reported that organizational support promotes safety compliance and decreases patient safety incidents, whereas Yuniati et al. [10] demonstrated that supportive organizational cultures are positively correlated with patient safety outcomes. In light of the resource and human power shortages in the health care environment in Pakistan, it becomes all the more important for organizations to ensure patient safety standards [8,9]. Most importantly, the results from mediation analysis showed that burnout acts as a partial mediator in the relationship between organizational support and patient safety culture. In other words, not only does organizational support increase patient safety, but it also increases it indirectly by reducing burnout levels. This study supports the findings of the JD–R model that organizational support works through two pathways in determining health care outcomes. However, despite the significance of these results, some caveats must be considered when analyzing them. First of all, a cross-sectional design was used, which makes it difficult to examine the causal relationship between the different variables in this research. Secondly, using a self-report measure to analyze the correlation between the variables makes the researcher vulnerable to response bias. Similarly, limitations have been reported in similar studies dealing with the same phenomenon [2,7]. From a practical point of view, the results suggest that efforts should be made by health care organizations to develop better organizational support mechanisms. Considering the problems that exist in Pakistan's healthcare system, these approaches are especially pertinent to improving healthcare quality and patient safety in such situations.

Conclusion

Organizational support is one of the determinants that play an important role in the health of employees and in creating a patient safety culture. Organizational support plays a significant role in the improvement of patient safety results as it contributes to lowering burnout rates.

Acknowledgements

The authors acknowledge all participants whose contributions to the study have been highly valued.

There is no conflict of interest.

No funding has been provided for this study.

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ISSN: (e) 3007-1607 (p) 3007-1593

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