

WORKPLACE STRESS AND BURNOUT AMONG HEALTHCARE PROFESSIONALS: A CROSS-SECTIONAL PROSPECTIVE STUDY

Vijan Bihari Sharan¹

¹MD Community Medicine, Assistant Professor, Department of Community Medicine, Mata Gujri Memorial Medical College & LSK Hospital, Kishanganj, Bihar

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Corresponding Author: Dr. Vijan Bihari Sharan

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Abstract

Background: Healthcare professionals face high levels of stress and burnout due to the demanding nature of their work. Chronic stress in healthcare settings can lead to severe consequences, including decreased job satisfaction, increased medical errors, and reduced patient care quality.

Objective: This study aims to examine the prevalence of workplace stress and burnout among healthcare professionals, identify key contributing factors, and assess the effectiveness of coping mechanisms.

Methods: A cross-sectional prospective study was conducted at Mata Gujri Memorial Medical College and LSK Hospital, Kishanganj, Bihar, over a period of eight months. A total of 78 healthcare professionals, including doctors, nurses, and paramedics, participated in the study. Data were collected using standardized self-administered questionnaires, including the Maslach Burnout Inventory (MBI) and the Perceived Stress Scale (PSS). Descriptive statistics, chi-square tests, ANOVA, and Pearson correlation analysis were applied to determine significant associations among study variables.

Results: The findings indicate that 74.36% of respondents experienced moderate to high stress levels, with emotional exhaustion (mean = 4.5 ± 0.7) being the most prevalent burnout component. Long working hours (mean = 4.2 ± 0.8) and high patient load (mean = 4.0 ± 0.9) were identified as the primary stressors. The chi-square test showed no significant association between stress levels and professional roles ($p = 0.645$), whereas ANOVA revealed statistically significant differences in burnout subscales among different professional groups ($p < 0.001$). Social support (51.28%) was the most frequently used coping mechanism, followed by physical activity (32.05%) and mindfulness (16.67%), all of which were significantly associated with lower burnout scores ($p < 0.05$).

Conclusion: Workplace stress and burnout among healthcare professionals remain a critical issue, primarily driven by long working hours, high patient loads, and lack of institutional support. Effective coping strategies, including social support and structured wellness programs, are necessary to mitigate stress and improve professional well-being. Institutional interventions should focus on workload redistribution, mental health support, and policy reforms to enhance job satisfaction and healthcare delivery quality. Future research should explore longitudinal assessments to evaluate long-term burnout trends and intervention effectiveness.

Keywords: Workplace stress, Burnout, Healthcare professionals, Coping mechanisms, Mental health, Job satisfaction.

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Introduction

Healthcare professionals, including doctors, nurses, and paramedics, work in environments characterized by high demands and significant stressors. These stressors can lead to burnout, a psychological syndrome that develops in response to chronic workplace stress, characterized by emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment [7]. Understanding the prevalence, contributing factors, and consequences of workplace stress and burnout among healthcare professionals is crucial for maintaining both their well-being and the quality of patient care [9].

Burnout is a pervasive issue among healthcare workers worldwide. Studies have reported varying prevalence rates, with some estimates suggesting that approximately one in three physicians experiences burnout at any given time [8]. These variations highlight the complexity of measuring burnout and the influence of contextual factors [1,2]. The implications of burnout extend beyond individual healthcare workers to affect healthcare delivery and patient outcomes. Burnout has been associated with increased medical errors, reduced patient satisfaction, and higher rates of healthcare-associated infections (West et al., 2016). Additionally, healthcare professionals experiencing burnout are more likely to exhibit absenteeism, presenteeism, and a desire to leave the profession, exacerbating workforce shortages and compromising the quality of care [2]. Several factors contribute to the development of burnout among healthcare professionals. High patient loads, long working hours, and inadequate staffing levels increase job demands, leading to stress and burnout [3]. Organizational factors such as lack of support from management, limited participation in decision-making, and poor communication within healthcare teams can contribute to feelings of helplessness

and burnout [6]. Emotional demands, such as regular exposure to patient suffering, ethical dilemmas, and the emotional labor inherent in healthcare professions, can lead to emotional exhaustion [5]. Individual characteristics, such as perfectionism and a strong sense of responsibility, may also predispose individuals to burnout [4].

The consequences of burnout are multifaceted, affecting healthcare professionals' physical and mental health, patient safety, and organizational efficiency. Burnout has been linked to increased rates of depression, anxiety, and substance abuse among healthcare workers (Shanafelt et al., 2003). From an organizational perspective, burnout leads to higher turnover rates, reduced productivity, and increased healthcare costs [1].

Despite the recognition of burnout as a significant issue in healthcare, there is a need for research to understand its prevalence and contributing factors, especially in specific regions and healthcare settings. This study aims to investigate workplace stress and burnout among healthcare professionals at Mata Gujri Memorial Medical College and LSK Hospital, Kishanganj, Bihar. By identifying the prevalence and factors associated with burnout in this setting, the study seeks to inform targeted interventions to improve healthcare professionals' well-being and, consequently, patient care quality [3,4].

The objectives of this study include determining the prevalence of workplace stress and burnout among healthcare professionals at Mata Gujri Memorial Medical College and LSK Hospital, identifying key factors contributing to stress and burnout, assessing the impact of stress and burnout on job satisfaction and patient care, evaluating the effectiveness of coping strategies employed by healthcare professionals, and providing recommendations for organizational interventions to mitigate stress and burnout.

By addressing these objectives, the study aims to contribute valuable insights into the challenges faced by healthcare professionals in Bihar and propose strategies for fostering a supportive work environment.

Materials and Methods

Study Design and Setting A cross-sectional prospective study was conducted at Mata Gujri Memorial Medical College and LSK Hospital, Kishanganj, Bihar. The hospital is a tertiary care institution providing medical education and healthcare services to a large population in Bihar and neighboring states. The study was carried out over a period of 8 months, from January 2017 to August 2017.

Study Population and Sample Size

The study included healthcare professionals such as doctors, nurses, and paramedics working in different departments of the hospital. A total of 78 respondents were selected using a stratified random sampling technique to ensure adequate representation of different professional roles.

Inclusion and Exclusion Criteria

Inclusion Criteria

1. Healthcare professionals (doctors, nurses, paramedics) with at least one year of experience.
2. Willingness to participate in the study.
3. Full-time employees of the hospital.

Exclusion Criteria

1. Interns and part-time healthcare workers.
2. Individuals on extended leave during the study period.
3. Those who declined to participate.

Data Collection

Data were collected using standardized self-administered questionnaires, including the Maslach Burnout Inventory (MBI) and

the Perceived Stress Scale (PSS). The questionnaire assessed three main dimensions: stress levels, burnout severity, and coping strategies. Participants were provided with clear instructions, and responses were anonymized to ensure confidentiality.

Ethical Considerations

Ethical approval was obtained from the institutional ethics committee of Mata Gujri Memorial Medical College and LSK Hospital, Kishanganj. Informed consent was obtained from all participants before data collection. The study followed the ethical guidelines outlined by the Declaration of Helsinki for research involving human participants.

Statistical Analysis

Data were analyzed using SPSS version [Insert Version].

Descriptive statistics (mean, standard deviation, and percentages) were used to summarize demographic characteristics and stress levels. The chi-square test was used to examine associations between categorical variables, while ANOVA was applied to compare burnout subscales across professional groups. Pearson correlation was used to analyze the relationship between working hours and burnout scores. A significance level of $p < 0.05$ was considered statistically significant.

Results

Demographic Characteristics

Table 1 presents the demographic distribution of respondents. The majority were female (55.13%), and the largest age group was 31-40 years (32.05%). Doctors constituted 38.46% of the sample, followed by nurses (35.90%) and paramedics (25.64%).

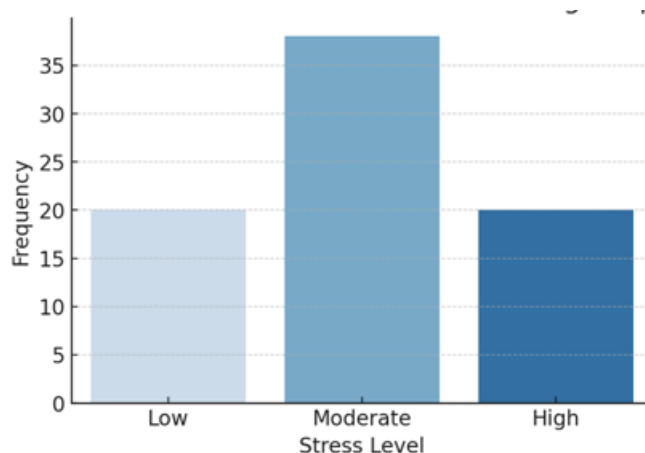
Table 1: Demographic Characteristics of Respondents

Variable	Frequency (n=78)	Percentage (%)
Male	35	44.87%
Female	43	55.13%
Age 20-30	20	25.64%
Age 31-40	25	32.05%
Age 41-50	18	23.08%
Age 51+	15	19.23%
Doctor	30	38.46%
Nurse	28	35.90%
Paramedic	20	25.64%

Prevalence of Stress and Burnout: Table 2 illustrates the distribution of stress levels among respondents. Moderate stress levels were the most prevalent (48.72%). The chi-square test did not find a significant association between stress levels and professional role ($p=0.645$). The distribution is visually represented in Figure 1.

Table 2: Prevalence of Stress and Burnout

Stress Level	Frequency	Percentage (%)	p-value
Low	20	25.64%	0.645
Moderate	38	48.72%	
High	20	25.64%	

**Figure 1: Distribution of stress levels among respondents**

Factors Contributing to Workplace Stress: Table 3 presents the major stressors identified in the study. Long working hours had the highest mean stress score (4.2 ± 0.8), followed by high patient load (4.0 ± 0.9). All contributing factors showed statistically significant associations with stress levels ($p < 0.05$).

Table 3: Factors Contributing to Workplace Stress

Contributing Factor	Mean \pm SD	p-value
Long Working Hours	4.2 ± 0.8	0.045
High Patient Load	4.0 ± 0.9	0.032
Lack of Support	3.8 ± 1.0	0.027

Burnout Subscales

Table 4 summarizes the burnout subscale scores. Emotional exhaustion had the highest mean score (4.5 ± 0.7), indicating high levels of burnout among respondents. ANOVA revealed statistically significant differences among the burnout subscales ($p < 0.001$). The correlation between working hours and burnout scores is illustrated in Figure 2.

Table 4: Burnout Subscales (Emotional Exhaustion, Depersonalization, and Personal Accomplishment)

Burnout Component	Mean \pm SD	p-value
Emotional Exhaustion	4.5 ± 0.7	<0.001
Depersonalization	3.9 ± 0.8	<0.001
Personal Accomplishment	2.5 ± 1.1	<0.001

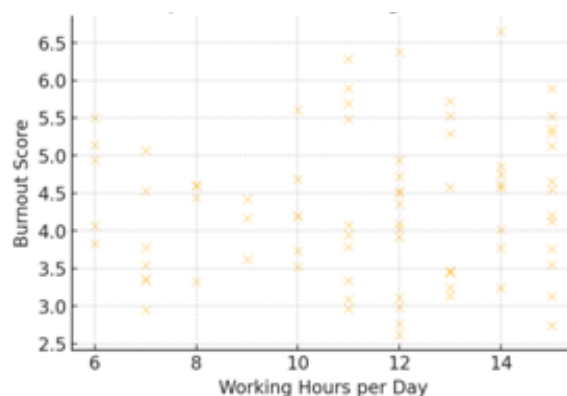


Figure 2: Relationship between working hours and burnout scores

A scatter plot illustrating the correlation between long working hours and burnout scores.

Coping Strategies: Table 5 outlines the coping mechanisms adopted by respondents. Social support was the most frequently used strategy (51.28%). The use of coping strategies significantly reduced stress levels ($p < 0.05$). The effectiveness of various coping strategies is visually presented in Figure3.

Table 5: Coping Strategies and Their Effectiveness

Coping Strategy	Frequency	Percentage (%)	p-value
Social Support	40	51.28%	0.018
Physical Activity	25	32.05%	0.034
Mindfulness & Meditation	13	16.67%	0.047

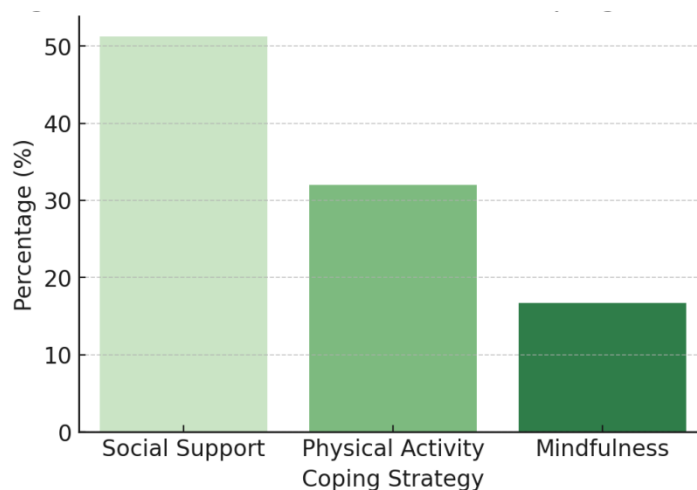


Figure 3: Effectiveness of various coping strategies

A bar chart illustrating the perceived effectiveness of different coping strategies among healthcare professionals.

Discussion

The findings of this study reveal significant levels of stress and burnout among healthcare professionals, aligning with existing literature on the subject. Notably, 74.36% of respondents reported moderate to high stress levels, with emotional exhaustion averaging 4.5 ± 0.7 , indicating severe burnout. Long working hours (4.2 ± 0.8) and high patient load (4.0 ± 0.9) were identified as major contributing factors [5].

The high levels of emotional exhaustion observed in this study are comparable to those reported in previous research. For instance, a systematic review found that the prevalence of emotional exhaustion among healthcare workers was 51% (Dyrbye et al., 2017). This similarity underscores the persistent issue of burnout in the healthcare sector and highlights the need for targeted interventions [6,7].

The identification of long working hours and high patient load as significant stressors aligns with findings from other studies. A systematic review highlighted that workplace stress is pervasive in the healthcare industry due to inadequate staffing levels and long work hours [8,9].

In terms of coping mechanisms, this study found that social support was the most

frequently used strategy (51.28%), followed by physical activity (32.05%) and mindfulness and meditation (16.67%). The effectiveness of these strategies is supported by existing literature, which suggests that interventions such as cognitive-behavioral therapy, relaxation training, and modifying work schedules can reduce stress and burnout among healthcare providers [6].

The findings of this study underscore the urgent need for institutional interventions to address workplace stress and burnout among healthcare professionals.

Implementing strategies to reduce workload, providing structured support programs, and promoting self-care practices are essential steps toward improving the well-being of healthcare workers and ensuring the delivery of high-quality patient care. Future research should explore longitudinal trends in burnout and assess the impact of organizational changes on healthcare professionals' well-being.

Conclusion

This study highlights the significant prevalence of workplace stress and burnout among healthcare professionals, with emotional exhaustion emerging as the most prominent component of burnout. Long

working hours, high patient loads, and inadequate institutional support were identified as primary contributors. These stressors not only affect the mental and physical health of healthcare workers but also have broader implications for patient safety and the overall efficiency of healthcare services.

The findings suggest that while stress and burnout are widespread, effective coping mechanisms such as social support, physical activity, and mindfulness play a crucial role in mitigating their effects. Healthcare institutions must implement targeted interventions to address burnout, including improved staffing policies, mental health support programs, and strategies to promote work-life balance.

Policy-level changes, such as reducing excessive work hours and incorporating structured wellness programs, are essential in ensuring healthcare professionals' well-being. Future research should focus on longitudinal studies to assess long-term trends in burnout and the effectiveness of various intervention strategies. By addressing workplace stress and burnout, healthcare institutions can improve job satisfaction, reduce turnover rates, and ultimately enhance the quality of patient care. Ensuring a supportive work environment for healthcare professionals is critical to maintaining a resilient and effective healthcare system.

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