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Assessment of Burnout and Job Satisfaction among Nurses Working in High-Stress Units of Tertiary Hospitals of Bahawalpur

Rida Majeed[1], Aliza Fatima[2], Hira Andleeb[3], Arooba Fatima[4], Muhammad Danish[4], Zaeem Ahmad[4], Farrukh Jamal[5]

[1]Pervaiz Ellahi Institute of Cardiology, Bahawalpur, Punjab, Pakistan.
[2]Bahawal Victoria Hospital, Bahawalpur, Punjab, Pakistan.
[3]New City Teaching Hospital, Mirpur, Azad Jammu Kashmir, Pakistan.
[4]Shahida Islam Nursing College, Lodhran, Punjab, Pakistan.
[5]Department of Statistics, The Islamia University of Bahawalpur, Punjab, Pakistan.

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Corresponding Author: Muhammad Danish,
Student of BSN Generic, Shahida Islam Nursing College, Lodhran, Punjab, Pakistan.
Email: hmdanishaltaf2000@gmail.com

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ABSTRACT

Background: Burnout among nurses in high-stress health care settings is a growing concern worldwide, significantly impacting both staff well-being and patient care. This study aimed to assess the levels of burnout and job satisfaction among nurses working in high-stress units of tertiary hospitals in Bahawalpur, Pakistan, and to identify key contributing factors. **Methods:** A descriptive cross-sectional survey was conducted among 75 registered nurses working in high-stress units including General Ward, Emergency, ICU, and Operation Theatre of tertiary care hospitals in Bahawalpur, Punjab, Pakistan. Data were collected from December 06, 2024 to February 05, 2025 using a structured, closed-ended questionnaire and analyzed using IBM SPSS version 27.0.1. Key variables included demographic information (age, gender, qualification, marital status), job characteristics (work unit, shift type, experience), burnout indicators, and job satisfaction components (salary, work environment, professional growth, and coworker relationships). Statistical tests such as independent samples t-test, ANOVA, chi-square analysis, and multiple regression were applied to determine associations and predictors of burnout. **Results:** A total of 75 nurses participated in the study, with the majority being female (81.3%) and single (80%). Most held a BSN (45.3%) or Post-RN diploma (40%) and worked in the General Ward (62.7%), followed by Emergency (16%), ICU (12%), and OT (9.3%). Rotating shifts were the most common (52.1%). Burnout levels were moderate to high, with 69.3% sometimes feeling emotionally drained, 54.7% often tired before starting work, and 50.7% sometimes feeling burned out by the end of the shift. Additionally, 54.7% had considered leaving their job due to burnout, while 68% reported that inadequate staffing negatively affected their mental health. Job dissatisfaction was noted in salary (53.3%), work environment (40%), and career growth (45.3%), although 62.7% were satisfied with coworker relationships. Statistical analysis showed no significant differences in burnout based on gender or working unit, but a significant relationship was found between shift type and burnout. Multiple regression indicated that while age, gender, shift, and experience together did not predict burnout significantly, greater work experience was individually associated with lower burnout ($\beta = -0.278$, $p = 0.046$). **Conclusion:** High levels of emotional exhaustion and moderate job satisfaction were observed among nurses in high-stress units. Shift patterns significantly influenced burnout, while experience mitigated it. These findings highlight the need for systemic interventions, including improved shift scheduling, emotional resilience training, and institutional support systems. By addressing organizational stressors, hospitals can foster a healthier work environment and reduce nurse burnout.

INTRODUCTION

Nursing is a cornerstone of health care systems across the globe, and nurses are vital to maintaining high standards of patient care. However, nursing is also one of the most demanding and emotionally laborious professions, particularly in tertiary care hospitals where patient flow, clinical complexity, and administrative duties can contribute significantly to stress. In high-pressure environments such as Karachi's tertiary hospitals, nurses often face long working hours, insufficient staffing, and inadequate support systems.

These conditions culminate in increased levels of occupational stress, job dissatisfaction, and mental fatigue, which in turn affect not only the personal well-being of the nurses but also the overall quality of health care delivery (Ali and Gir 2025); (Said and El-Shafei 2021). Workload-related stress has emerged as a prevalent occupational hazard among nurses, influencing their psychological resilience and professional commitment (Bae 2024). In Pakistan, where tertiary hospitals are frequently overburdened and underfunded, the effects of workload stress on nurses are especially pronounced and under-researched.

The relationship between excessive workload and nurse stress has been well-documented internationally. (Nababan 2025) observed a strong correlation between nurse workload and stress levels in Intensive Care Units, where critical care demands exacerbate pressure on staff. (Dai, Xie et al. 2025), through a meta-analysis, revealed that operating room nurses are especially prone to burnout due to high mental and physical workload, rapid decision-making, and prolonged standing hours. Similarly, (Zabin, Qaddumi et al. 2025) highlighted that job stress negatively affects the perception of patient safety culture in hospital settings, suggesting that stress undermines nurses' confidence and attentiveness. Furthermore, Chinese studies conducted during public health emergencies have shown that inadequate coping mechanisms and poor social support aggravate the effects of fatigue and mental workload among health care workers (Ren, Wang et al. 2025);(Xiong, Luo et al. 2024). These findings suggest a global concern, but also expose a geographical gap in the literature very little empirical evidence exists on how workload stress affects nurses in South Asia, particularly in urban centers like Karachi. Moreover, factors such as staff-patient ratios, long shift rotations, lack of recognition, and limited opportunities for professional growth continue to be overlooked in existing research (Basu, Akter et al. 2025);(Jin, Qian et al. 2024).

Given this background, the present study seeks to explore the extent and impact of workload-related stress among nurses working in tertiary care hospitals in Karachi. This study is crucial in the context of Pakistan, where the health care infrastructure is stretched, and tertiary hospitals are often under-staffed and over-utilized. Nurses are frequently assigned to multiple critical tasks without sufficient recovery time or institutional support, which accelerates burnout and decreases job satisfaction. Despite being the backbone of hospital operations, nurses in Pakistan are underrepresented in workforce planning, mental health policies, and occupational health strategies. Hence, this research is designed to fill these knowledge gaps by analyzing how workload stress manifests in different nursing units (ICU, general ward, emergency, OT, etc.), identifying its psychological and emotional effects, and assessing its relationship with burnout and job satisfaction. The study will also explore variables like work shift timing, perceived management support, and coping strategies used by nurses (Ali and Gir 2025);(Ren, Wang et al. 2025). Ultimately, the findings aim to guide health care administrators and policymakers in implementing practical interventions to improve nurses' mental health, reduce burnout, and ensure a safer working environment for sustainable health care delivery.

Research Question

1. What are the levels of burnout and job satisfaction among nurses in high-stress units, and how are these related to shift patterns, unit placement, and work experience?

OBJECTIVES

1. To assess burnout and job satisfaction among nurses in high-stress units of tertiary hospitals in Bahawalpur.
2. To examine how shift patterns, unit type, and work experience influence these factors.

Significance of the Study

This study highlights the impact of workplace stress on nurses' mental health and job satisfaction. Identifying key stressors will help hospital administrators develop targeted interventions to reduce burnout, retain staff, and enhance patient care quality (Shields and Wilkins 2009);(Dall'Ora, Ball et al. 2020).

Conceptual Definitions

Burnout: A state of emotional, mental, and physical exhaustion caused by prolonged stress, especially common among healthcare workers in demanding environments (Maslach and Jackson 1981).

Job Satisfaction: The degree to which nurses feel content and motivated in their professional roles, influenced by working conditions and interpersonal relationships (Lu, While et al. 2005).

High-Stress Units: Clinical settings like ICUs, ERs, and OTs where work is intense and emotionally demanding (Adriaenssens, De Gucht et al. 2015).

Shift Pattern: The schedule by which nurses are assigned to work (e.g., rotating, night), which significantly affects fatigue and job satisfaction (Yildirim and Aycan 2008).

LITERATURE REVIEW

Workload-related stress among nurses has been widely acknowledged as a critical issue that compromises both nurses' well-being and patient care outcomes. Stress in nursing is often associated with high job demands, time pressures, emotional labor, and inadequate staffing (Ali and Gir 2025). The cumulative effect of these stressors has been documented to result in burnout, reduced job satisfaction, and increased turnover intentions (Basu, Akter et al. 2025). Specifically, intensive care units (ICUs) and operating theaters have been identified as

high-stress areas due to the complexity and acuity of patient conditions (Nababan 2025);(Dai, Xie et al. 2025).

(Zhou 2025) highlight that burnout has multifactorial roots including long work hours, poor nurse-patient ratios, and lack of managerial support. In another study,(Jin, Qian et al. 2024) used latent profile analysis to identify groups of nurses based on their mental workload, further emphasizing that workload is a significant predictor of burnout and job dissatisfaction. In line with this, (Al-Dossary 2023) report that extended work shifts contribute to fatigue and emotional exhaustion, exacerbating workplace stress.

Moreover, the relationship between psychological factors and workload stress has gained prominence.(Ren, Wang et al. 2025) found that perceived social support and positive coping styles can mediate the impact of high workloads on mental health. Similarly, (Bae 2024) reported that nurse staffing levels and mandatory overtime are closely linked with emotional burnout and intent to leave.(Han, Zheng et al. 2023) also observed that workplace culture and emotional resilience play a crucial role in modulating stress outcomes in high-stakes clinical settings.

(Said and El-Shafei 2021) documented that occupational stress during the COVID-19 pandemic significantly influenced nurses' job satisfaction and turnover intention. (Khalil and Radha Aziz 2024) further explored how the quality of health care is mediated by job burnout, particularly in high-pressure environments. Other studies also connect burnout with empathy loss (Smith & Johnson, 2025), poor patient safety attitudes (Zabin, Qaddumi et al. 2025);(Lee, Dai et al. 2024), and mental fatigue (Xiong, Luo et al. 2024).

Furthermore,(Shahbaz, Akram et al. 2023);(Bu, Peng et al. 2024) emphasized that administrative support and participatory decision-making reduce burnout symptoms in clinical nurses, pointing to institutional strategies for mitigating stress. An international comparative study by (Trillo, Ortega-Maldonado et al. 2025) showed that countries with stronger nurse unions and policy protections report lower stress and burnout levels, highlighting the impact of structural support.

The influence of leadership styles on nurse stress is another critical factor. Transformational leadership has been associated with reduced stress and higher job satisfaction among nurses, as reported by (Martins, Serrão et al. 2022). Likewise, peer mentorship and team cohesion were found to buffer the effects of stressors in high-acuity settings (Özdemir Yılmaz and Yılmaz 2024).

MATERIALS AND METHODS

Study Design

This research follows a descriptive cross-sectional study design, aimed at assessing the levels and determinants of burnout and job satisfaction among nurses employed in high-stress clinical units within tertiary care hospitals in Bahawalpur, Pakistan.

Setting

The study was conducted in selected tertiary hospitals in Bahawalpur, including both public and private institutions.

Duration

The duration of the study is 2 months, December 06, 2024 to February 05, 2025.

Sample Size

75 nurses from public and private hospitals of Bahawalpur.

Sampling Technique

A non-probability purposive sampling technique was utilized. Nurses were selected from high-stress units including Intensive Care Units (ICUs), Emergency Departments, Operation Theatres, and Post-COVID-19 Care Units. Eligible participants were approached during duty hours, and informed consent was obtained.

Sample Selection

Inclusion Criteria

1. Registered Nurses with a minimum of 6 months of clinical experience
2. Currently posted in high-stress units
3. Willing to provide written informed consent

Exclusion Criteria

1. Nurses in non-clinical or administrative roles
2. Nursing students or interns
3. Nurses on extended leave or not available during data collection

METHODOLOGY

Data were collected through a structured, self-administered questionnaire, adapted from validated tools including:

1. The Maslach Burnout Inventory
2. The Job Satisfaction Scale

Variables

Dependent Variables (Outcomes)

1) Burnout levels
2) Job satisfaction
3) Intention to leave job

Independent Variables (Predictors):

1) Age
2) Gender
3) Department/unit
4) Years of experience
5) Shift timing

Statistical Analysis

Data were entered and analyzed using **SPSS version 27.0**.1. The analysis included:

1. **Descriptive Statistics:** Frequencies & percentages.
2. **Chi-Square Tests:** To determine associations between categorical variables
3. **Independent t-tests/ANOVA:** To compare burnout and satisfaction across different units and shift timings
4. **Multiple Regression Analysis:** To identify significant predictors of burnout and job satisfaction
5. A **p-value <0.05** was considered statistically significant

All data is stored securely, and participant confidentiality has been ensured. Only the principal investigator and authorized personnel have access to the data.

RESULTS

Descriptive Statistics

A total of 75 nurses participated in the study. The majority were female (81.3%), and most participants were single (80%). Regarding qualification, 45.3% held a Bachelor of Science in Nursing (BSN), while 40% held a Post-RN diploma. Most respondents worked in the General Ward (62.7%), followed by Emergency (16%), ICU (12%), and Operation Theatre (9.3%). Regarding shift type, 52.1% reported working rotating shifts, with morning shift (31.5%) being the second most common.

Table 1

Demographic Characteristics of Participants (n=75)

Variable	Category	Frequency	Percentage
Gender	Male	14	18.7%
	Female	61	81.3%
Marital Status	Single	60	80.0%
	Married	15	20.0%
Qualification	Diploma	9	12.0%
	BSN	34	45.3%
	Post-RN	30	40.0%
	MSN or Above	2	2.7%
Working Unit	ICU	9	12.0%
	Emergency	12	16.0%
	General Ward	47	62.7%
	OT	7	9.3%
Work Shift	Morning	23	31.5%
	Evening	6	8.2%
	Night	6	8.2%
	Rotating	38	52.1%

Burnout and Job-Related Responses

The analysis of burnout indicators revealed that a substantial proportion of nurses experience emotional strain in their professional roles. Specifically, 69.3% of participants reported that they sometimes felt emotionally drained from their work, while 53.3% sometimes felt frustrated with their job. Additionally, 54.7% stated they often felt tired in the morning at the thought of starting a new workday. Notably, 36% of the respondents often doubted the significance of their work, and 50.7% sometimes felt burned out by the end of their shift. These findings indicate a moderate to high prevalence of emotional exhaustion among the nursing staff (Table 2).

Table 2

Burnout Indicators among Nurses (n = 75)

Burnout Indicator	Response Most Reported	Percentage (%)
Emotionally drained from work	Sometimes	69.3
Frustrated with job	Sometimes	53.3
Tired in the morning before work	Sometimes	54.7
Doubt the significance of work	Often	36.0
Feel burned out at the end of the day	Sometimes	50.7

In terms of job satisfaction, 53.3% of respondents expressed dissatisfaction with their salary and benefits, and 40% were dissatisfied with their work environment. On a more positive note, 62.7% of nurses reported satisfaction with their relationships with coworkers. However, professional growth opportunities were found to be a concern, with 45.3% indicating dissatisfaction in this area.

Table 3

Job Satisfaction Responses among Nurses (n = 75)

Job Satisfaction Factor	Satisfaction Level	Percentage (%)
Salary and benefits	Dissatisfied	53.3
Work environment	Dissatisfied	40.0
Relationship with coworkers	Satisfied	62.7
Professional growth opportunities	Dissatisfied	45.3

Furthermore, 68% of the participants acknowledged that current staffing levels negatively impacted their mental health. Alarmingly, 54.7% had considered leaving their job due to symptoms of burnout. These findings underscore the pressing need for administrative attention to staffing, workplace culture, and well-being support systems within hospital environments.

Table 4

Burnout Impact and Intentions

Variable	Response	Percentage (%)
Staffing affects mental health	Yes	68.0
Considered leaving job due to burnout	Yes	54.7

t-test Analysis

An independent samples t-test was conducted to compare the mean burnout scores of male and female nurses. The analysis indicated no statistically significant difference in burnout levels based on gender ($t = -0.119$, $p = 0.906$). These findings suggest that gender does not play a significant role in the experience of burnout among the nursing staff in the current sample.

Table 5

Independent Samples T-Test Comparing Burnout Scores by Gender (n = 75)

Variable	Mean (Male)	Mean (Female)	t-value
Burnout Score	1.43	1.46	-0.119

One-Way ANOVA

A one-way Analysis of Variance (ANOVA) was conducted to compare burnout levels across different working units. The results indicated no significant difference in burnout scores between the groups, $F(3,71)=1.934, p=0.132$ $F(3, 71) = 1.934$, $p = 0.132$.

Figure 2

Mean Burnout Scores by Unit: A bar chart depicting the mean burnout scores for the Intensive Care Unit (ICU), Emergency Department, General Ward, and Operating Theater (OT).

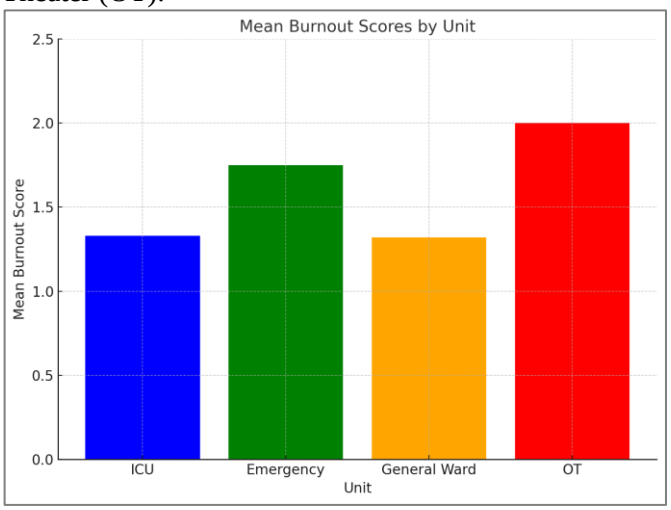

Table 6

Mean Burnout Scores by Unit

Unit	Mean Burnout Score
ICU	1.33
Emergency	1.75
General Ward	1.32
OT	2.00

Chi-Square Tests

Chi-square analysis was conducted to examine the relationship between burnout and work shift, as well as between burnout and working unit. The results revealed a significant association between work shift and burnout ($\chi^2(9) = 17.483$, $p = 0.042$), suggesting that burnout levels vary according to the shift patterns nurses work. In contrast, no significant relationship was found between the working unit and burnout ($\chi^2(9) = 12.153$, $p = 0.205$), indicating that the unit in which a nurse is assigned does not significantly influence burnout levels.

Table 7

Chi-Square Results for Burnout by Work Shift and Unit

Comparison	Chi-Square Value	df	p-value
Burnout * Work Shift	17.483	9	0.042
Burnout * Unit	12.153	9	0.205

Chi-Square Tests			
	Value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	17.483[a]	9	.042
Likelihood Ratio	16.206	9	.063
Linear-by-Linear Association	.896	1	.344
N of Valid Cases	73		

a. 11 cells (68.8%) have expected count less than 5. The minimum expected count is .58.

Multiple Regression Analysis

A multiple regression analysis was performed to identify potential predictors of burnout, including age, gender, work shift, and work experience. The overall model was not statistically significant ($F(4, 68) = 1.327$, $p = 0.269$; $R^2 = 0.072$), suggesting that the combined effect of these variables does not significantly predict burnout levels. However, when considering individual predictors, work experience was found to be a significant predictor of burnout ($\beta = -0.278$, $p = 0.046$). Specifically, nurses with more work experience reported lower levels of burnout.

Table 8

Regression Analysis Results (Predicting Burnout)

Predictor	B	Std. Error	Beta	t	p-value
(Constant)	1.531	0.253	—	6.049	0.000
Age	0.060	0.213	0.033	0.279	0.781
Gender	0.413	0.302	0.189	1.370	0.175
Work Shift	-0.063	0.079	-0.099	-0.794	0.430
Work Experience	-0.457	0.225	-0.278	-2.033	0.046

DISCUSSION

The findings of this study on burnout among nurses working in high-stress units in Bahawalpur provide significant insights into the key factors contributing to burnout in this population. A significant relationship was found between work shift patterns and burnout, which is consistent with previous studies highlighting the negative effects of irregular or extended shifts on nurse well-being (Ali and Gir 2025);(Nababan 2025). This suggests that nurses working night shifts or rotating shifts are more likely to experience emotional exhaustion and burnout. This aligns with the findings of (Bae 2024), who reported that longer work hours and night shifts contributed to higher burnout levels among health care professionals, leading to increased fatigue and reduced quality of life.

In contrast, no significant association was found between the nursing unit and burnout in this study, which is in contrast to the findings of studies such as (Zabin, Qaddumi et al. 2025);(Shaista, Rahman et al. 2024), which highlighted that nurses in high-stress units like intensive care units (ICUs) or emergency departments are more prone to burnout due to the nature of their work environment. The lack of a significant relationship in our study may indicate that burnout is a more generalized

issue across various nursing units rather than being isolated to specific high-intensity environments. This suggests that factors beyond the specific unit, such as workload, administrative support, and shift patterns, might have a more profound effect on burnout levels.(Ren, Wang et al. 2025)

The multiple regression analysis in this study revealed that work experience was a significant predictor of burnout, with more experienced nurses reporting lower burnout levels. This is consistent with the research by (Dai, Xie et al. 2025);(Xiong, Luo et al. 2024), which showed that experienced nurses are better equipped to handle job-related stress and fatigue. Their coping mechanisms and ability to manage stressful situations might explain their lower levels of burnout compared to less experienced colleagues. This finding reinforces the idea that experience in the nursing profession acts as a protective factor against burnout, allowing nurses to develop better stress management skills over time.

Although no significant relationships were found for age and gender in the regression model, previous research has shown mixed results regarding these factors. Some studies suggest that younger nurses are more vulnerable to burnout due to less experience in handling stress (Basu, Akter et al. 2025); (Said and El-Shafei 2021), while others argue that gender differences in burnout are influenced by coping strategies and role expectations (Wang et al., 2024). Further research is needed to explore the interaction of these variables in more detail.

CONCLUSION

The primary objective of this research study was to examine burnout and job satisfaction among nurses working in high-stress units of tertiary hospitals in Bahawalpur. The findings shed light on significant factors influencing burnout, such as work shift patterns and work experience. High levels of burnout were observed among nurses, with emotional exhaustion being the most pronounced dimension. Shift patterns showed a statistically significant impact on burnout, indicating that irregular or demanding work hours may intensify stress and emotional fatigue among nurses. Conversely, work experience appeared to buffer the effects of burnout, suggesting that seasoned nurses might have developed coping strategies or resilience over time.

Interestingly, gender, unit type, and age did not significantly predict burnout, which implies that organizational and systemic factors may outweigh demographic influences in determining nurse well-being. These insights are critical in the context of South Punjab's healthcare settings, where challenges such as nurse shortages, high patient loads, and inadequate support systems are common.

This study provides valuable evidence to support the development of targeted interventions aimed at reducing burnout and enhancing job satisfaction—such as equitable shift scheduling, stress management workshops, mentorship programs, and strategies that recognize and support experienced staff. By focusing on modifiable workplace factors, healthcare institutions can improve both nurse retention and the quality of patient care.

Limitations

While the study offers meaningful insights, certain limitations must be acknowledged. The relatively small sample size and the study's confinement to select tertiary hospitals in Bahawalpur may limit the generalizability of the findings. Moreover, the use of self-reported questionnaires introduces potential response bias, as participants may have either overstated or understated their levels of burnout and job satisfaction. Additionally, the cross-sectional nature of the study restricts the ability to infer causal relationships between variables. The study environment, limited to specific high-stress units, may also not fully represent the broader nursing workforce in diverse clinical settings across Pakistan.

Recommendations

Future research should consider conducting similar studies across multiple hospitals and regions, including both public and private healthcare institutions, to improve the generalizability of findings. A larger, more diverse sample size would offer a broader perspective on burnout and job satisfaction among nurses in Pakistan. Additionally, incorporating a mixed-methods approach—combining both quantitative and qualitative data—would provide deeper insights into institutional, cultural, and psychosocial factors contributing to nurse burnout.

It is also recommended that healthcare institutions implement regular mental health assessments, provide resilience training programs, and review their staffing and scheduling policies to create a more supportive work environment. Policy-level reforms and investment in continuing professional development could further enhance nurse retention and overall care quality

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