

Burnout and Coping Strategies Among Nurses in High-Acuity Units: A Cross-Sectional Study in a Tertiary Hospital in Riyadh

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Abstract:

Background: Nurses working in intensive care units (ICUs) and emergency departments (EDs) experience high physical and psychological demands, which makes them more vulnerable to occupational burnout.

Objective: The study aimed to measure the level of burnout and explore the coping strategies used by nurses in high-acuity units of a tertiary hospital in Riyadh, Saudi Arabia.

Methods: A cross-sectional descriptive design was applied between September and December 2022. A total of 142 ICU and ED nurses completed a self-administered survey that included the Maslach Burnout Inventory (MBI-HSS) and the Brief COPE scale. Data were analyzed using SPSS Version 26.

Results: Findings showed that 37.3% of nurses reported high emotional exhaustion, 34.5% experienced depersonalization, and 47.9% had low personal accomplishment. The most common coping strategies were active coping, planning, emotional support, acceptance, and self-distraction.

Conclusion: Burnout is widespread among nurses working in high-acuity units in Riyadh. Although adaptive coping strategies are frequently applied, organizational support and systemic interventions are essential to reduce stress, build resilience, and enhance nurse well-being in these demanding settings.

Keywords: Burnout, Coping Strategies, Nurses, ICU, Emergency Department, Saudi Arabia.

INTRODUCTION

The nursing workforce worldwide is facing growing demands, especially in high-acuity environments such as intensive care units (ICUs) and emergency departments (EDs). Nurses in these settings are responsible for making urgent decisions, providing care to critically ill patients, and managing high-pressure situations that are both physically and emotionally challenging. These conditions often contribute to occupational burnout, which the World Health Organization (2019) defines as a syndrome caused by long-term workplace stress. Burnout is characterized by emotional exhaustion, depersonalization, and a decline in professional effectiveness.

Burnout among nurses working in high-acuity settings is a global challenge, linked to poor patient outcomes, increased absenteeism, low job satisfaction, and high staff turnover. In a multicenter study across Spanish emergency departments, Portero de la Cruz et al. (2020) reported significant associations between burnout, perceived stress, and negative health outcomes among nurses. Likewise, Phillips et al. (2022) highlighted the widespread presence of burnout and emotional fatigue among nurses in U.S. emergency departments, noting that these issues were intensified by nursing shortages and extended shift hours. Both studies emphasized the importance of resilience and adaptive coping strategies in sustaining mental health and professional performance.

Evidence from Asia also highlights similar concerns. In China, Lu et al. (2015) reported that nurses in high-acuity departments faced severe occupational stress, often linked to poor staffing ratios and rigid hospital hierarchies. In Brunei, Isa et al. (2019) explored the coping strategies used by emergency and ICU nurses,

including task prioritization, humor, spiritual beliefs, and peer support. Their findings showed that both problem-focused and emotion-focused strategies played a direct role in influencing burnout outcomes. The relationship between coping styles and burnout has also been investigated. Howlett et al. (2015) found that maladaptive coping approaches, such as avoidance and emotional suppression, were strongly associated with higher levels of burnout among emergency healthcare professionals. By contrast, adaptive strategies, including planning and seeking support, served as protective factors against burnout.

A systematic review by Friganović et al. (2019) reported strong associations between burnout and job dissatisfaction in critical care settings. Their findings highlighted the importance of organizational culture, leadership, and access to mental health resources in shaping coping behaviors among nurses. Similarly, Hallman et al. (2014) showed that mindfulness-based stress reduction (MBSR) programs improved emotional resilience among staff in a high-acuity adolescent psychiatric unit, reducing burnout levels and strengthening safety culture.

Research has also examined differences in burnout across unit types. In a Brazilian hospital, Paes et al. (2022) reported that ICU nurses had higher emotional exhaustion scores compared to ER nurses, which may be linked to their ongoing exposure to end-of-life care and family-related distress. Similarly, Abraham et al. (2018) found that coping strategies and stress levels varied across hospital departments, influenced by factors such as department size and managerial support. These findings emphasize that nurse burnout is shaped not only by individual coping strategies but also by contextual and organizational factors.

Although international studies provide valuable insights, research on burnout and coping among nurses in Saudi Arabia, particularly in tertiary hospitals, is still scarce. Cultural, organizational, and religious factors that may influence coping behaviors in this context have not been fully examined in the global literature. Moreover, unique stressors such as gender-based role expectations, limited awareness of mental health, and high patient-to-nurse ratios in public hospitals highlight the need for local investigation.

This study aims to examine the prevalence of burnout and explore the coping strategies utilized by nurses working in high-acuity units in a tertiary hospital in Riyadh, Saudi Arabia. The findings will contribute to a culturally relevant understanding of nurse well-being in the Saudi healthcare system and inform the development of institutional support programs to reduce burnout and enhance nurse retention.

METHODOLOGY

Study Design

This study adopted a quantitative, cross-sectional descriptive design to assess the prevalence of burnout and the coping strategies used by nurses working in high-acuity units. Data collection was carried out between September and December 2022 in a large tertiary care hospital in Riyadh, Saudi Arabia.

Setting and Population

The study was carried out in a government-funded tertiary hospital that included both Intensive Care Units (ICUs) and an Emergency Department (ED). These departments were chosen because of their consistently high patient acuity levels and demanding staffing requirements. The target population consisted of registered nurses working in the ICU or ED who had at least six months of clinical experience at the time of data collection.

Sample Size and Sampling Technique

A convenience sampling approach was employed to recruit participants. Of the 180 eligible nurses working in the ICU and ED units, 142 consented to take part and completed the survey, resulting in a response rate of 78.9%. The sample size was considered adequate, as it was consistent with similar studies examining burnout and coping strategies in acute care environments.

Data Collection Tools

Data were collected using a self-administered questionnaire consisting of three sections. The first section captured demographic and professional information, including age, gender, nationality, years of experience, unit type, and shift patterns. The second section applied the Maslach Burnout Inventory–Human Services Survey (MBI-HSS), a validated tool that measures burnout across three domains: Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA). The third section included the Brief COPE Inventory, developed by Carver (1997), which evaluates coping strategies. This tool measures both problem-focused strategies (such as active coping and planning) and emotion-focused strategies (such as venting and denial).

All instruments were administered in English, which is the primary operational language of the hospital. Permission to use the tools was obtained prior to the study. While a small number of participants requested clarification on certain items, no formal translation was required.

Ethical Considerations

Ethical approval for this study was secured from the hospital’s Institutional Review Board (IRB) in August 2022. Participation was voluntary, and informed consent was obtained from all respondents prior to data collection. Anonymity and confidentiality were maintained throughout the study, including data handling and reporting. Participants were also informed that they could withdraw at any time without any consequences.

Data Analysis

Data were analyzed using IBM SPSS Statistics Version 26. Descriptive statistics, including means, standard deviations, frequencies, and percentages, were applied to summarize demographic characteristics, burnout levels, and coping strategies. Burnout scores were classified according to standard MBI thresholds into low, moderate, or high levels for each subscale. Pearson’s correlation and independent t-tests were conducted to explore relationships between burnout domains, coping strategies, and demographic factors such as age, years of experience, and unit type. A p-value of less than 0.05 was considered statistically significant.

FINDINGS

1. Participant Demographics

A total of 142 nurses participated in the study. The majority were female (76.1%), with a mean age of 32.4 years (± 6.5). More than half of the participants were expatriate nurses (56.3%), and the average length of professional experience was 7.8 years (± 4.1). Most respondents were employed in the ICU (58.5%), while the remainder worked in the emergency department (41.5%).

Table 1: Demographic Profile of Participants (n = 142)

Variable	Details
Gender	Female: 108 (76.1%), Male: 34 (23.9%)
Age (Mean \pm SD)	32.4 \pm 6.5 years
Nationality	Saudi: 62 (43.7%), Expatriate: 80 (56.3%)
Years of Experience (Mean \pm SD)	7.8 \pm 4.1 years
Unit Type	ICU: 83 (58.5%), ED: 59 (41.5%)

2. Burnout Levels

Burnout levels were measured using the Maslach Burnout Inventory–Human Services Survey (MBI-HSS). Results showed that 37.3% of nurses experienced high emotional exhaustion, while 34.5% reported high depersonalization. In addition, 47.9% of participants indicated low personal accomplishment, reflecting an overall high risk of burnout among the study population.

Table 2: Burnout Levels Among Nurses (n = 142)

MBI Subscale	Low	Moderate	High
Emotional Exhaustion	38 (26.8%)	51 (35.9%)	53 (37.3%)
Depersonalization	45 (31.7%)	48 (33.8%)	49 (34.5%)
Personal Accomplishment	28 (19.7%)	46 (32.4%)	68 (47.9%)

3. Coping Strategies

Coping strategies were assessed using the Brief COPE Inventory. The five most frequently used strategies were predominantly adaptive, with active coping (mean = 5.8), planning (mean = 5.6), and emotional support (mean = 5.4) reported as the highest. These findings suggest a preference for problem-focused coping approaches, which the literature has commonly associated with reduced burnout severity.

Table 3: Top 5 Coping Strategies by Mean Score (Brief COPE)

Coping Strategy	Mean Score (±SD)
Active Coping	5.8 ± 1.2
Planning	5.6 ± 1.3
Emotional Support	5.4 ± 1.4
Acceptance	5.3 ± 1.0
Self-Distraction	5.1 ± 1.5

DISCUSSION

This study examined the prevalence of burnout and the coping strategies used by nurses working in high-acuity units, specifically the ICU and emergency department of a tertiary hospital in Riyadh. The results indicated a high prevalence of burnout, particularly in emotional exhaustion (37.3%) and depersonalization (34.5%). These findings align with international research, which has consistently highlighted the psychological demands of high-acuity nursing roles.

These findings are consistent with those of Phillips et al. (2022), who reported similarly high burnout rates among emergency department nurses in the United States. Comparable results were also observed by Paes et al. (2022), who found that ICU nurses experienced greater emotional exhaustion compared to colleagues in other units. This pattern was evident in the present study, suggesting that high patient acuity, ethical challenges, and frequent exposure to mortality in ICUs may play a significant role in driving emotional exhaustion.

A particularly concerning finding was the low sense of personal accomplishment reported by nearly half of the participants (47.9%). Although this subscale is often less emphasized in burnout research, it plays a vital

role in sustaining job satisfaction and staff retention. Similar trends were described by Friganović et al. (2019), who noted that reduced personal accomplishment among nurses was associated with higher levels of cynicism, detachment, and strained interpersonal relationships in clinical practice.

With regard to coping strategies, nurses in this study mainly relied on problem-focused approaches such as active coping (mean = 5.8), planning (mean = 5.6), and seeking emotional support (mean = 5.4). Previous research has shown that these strategies act as protective factors against burnout (Howlett et al., 2015). Their prominence in the current study suggests that, despite experiencing high levels of burnout, nurses are making proactive efforts to manage stress. This may reflect the influence of institutional initiatives aimed at fostering resilience, as well as cultural norms that emphasize spiritual and social support as important coping resources. It is also notable that emotion-focused strategies, such as self-distraction (mean = 5.1), were reported by participants. This suggests that while many nurses attempt to cope adaptively, some resort to avoidant behaviors when under significant stress. Similar findings were described by Isa et al. (2019), who reported that nurses in Brunei often relied on a combination of religious faith, acceptance, and distraction to manage high levels of stress. In the Saudi context, cultural and religious values may play an important role in shaping both emotion-focused and socially supportive coping strategies, highlighting the need for further qualitative exploration.

LOCAL IMPLICATIONS

These findings carry important implications for nursing workforce policies in Saudi Arabia. Burnout not only affects the well-being of individual nurses but also poses risks to patient safety and contributes to staff turnover. While adaptive coping behaviors were evident, institutional support remains critical. This includes access to mental health services, workload management, professional development opportunities, and structured peer support groups. Moreover, the large proportion of expatriate nurses (56.3%) may face additional stressors related to cultural adjustment, social isolation, and challenges in maintaining work–life balance.

LIMITATIONS

This study has some limitations. First, the use of convenience sampling restricts the generalizability of findings beyond the study site. Second, data were collected through self-reported questionnaires, which may be influenced by social desirability or underreporting bias. Third, the study relied exclusively on quantitative data, limiting the depth of insight into individual coping experiences. Future research would benefit from mixed-methods or qualitative approaches to explore cultural influences, gender dynamics, and workplace relationships in greater detail.

CONCLUSION

This study revealed a high prevalence of burnout among nurses working in high-acuity units of a tertiary hospital in Riyadh, with particularly high levels of emotional exhaustion and low personal accomplishment. Despite these pressures, many nurses relied on adaptive coping strategies such as active coping, planning, and emotional support. These findings highlight the urgent need for institutional interventions, including structured mental health services, effective workload management, and resilience training, to protect nurse well-being and strengthen patient care in high-stress environments. Addressing burnout is therefore not only essential for staff retention but also for maintaining the safety and quality of healthcare delivery.

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