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THEORY-BASED STUDIES

An observational study of stress and coping among ICU nurses in Iraq through the lens of the Lazarus and Folkman model

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Abstract
Intensive Care Unit (ICU) nurses face high-stress environments due to critical patient conditions, intense workloads, and emotional challenges. Understanding the specific stressors and coping mechanisms is vital for developing effective support interventions, which necessitates a framework like Lazarus and Folkman's model. For this reason, Lazarus and Folkman's Transactional Model of Stress and Coping provides a theoretical framework to assess how nurses perceive and manage stress during their work. A descriptive cross-sectional study was conducted among ICU nurses at three public hospitals in Iraq. The study utilized a purposive sampling method to recruit participants. A total of 350 nurses participated in all phases of the study. Data collection was performed using the Nursing Stress Scale (NSS) and the Ways of Coping Questionnaire (WCQ), both of which were tested for validity and reliability. Statistical analyses included descriptive statistics, t-tests, ANOVA, and Pearson correlation. The study revealed that ICU nurses experience moderate to high stress levels (mean=82.4±14.6), with primary stressors being workload, death and dying, administrative deficiencies, and interpersonal conflict. Particularly, problem-focused coping strategies were used more commonly (mean=72.1±11.4) than emotion-focused strategies (mean=64.5±13.2). A negative correlation was found between stress and problem-focused coping ($r=-0.48$, $p<0.001$). Furthermore, a positive correlation was observed with emotion-focused coping ($r=0.41$, $p<0.001$). Higher stress levels were associated with younger age, female, and less ICU experience. The findings indicate that ICU nurses in Iraq experience significant occupational stress during the work. This highlights the importance of accentuating problem-focused coping strategies and organizational perspective in nursing. The study underlines the necessity for stress management interventions personalized to the Iraqi nurses working in the ICU.

Keywords: Coping, emergency nursing practice, Intensive Care Unit, nurses, stress

Introduction

Intensive Care Unit (ICU) nurses are potentially exposed to high-pressure environments where they must make rapid clinical decisions that often in life-or-death situations (Babkair et al., 2024). This makes nurses particularly vulnerable to occupational stress related to their work (Mohammed, 2024; Wu et al., 2025). If left untreated, stress among ICU nurses can lead to burnout, decreased job satisfaction, and reduced productivity (Quesada-Puga et al., 2024). Prolonged exposure to stress can also negatively impact their physical and mental health that increasing the risk of anxiety, depression, and cardiovascular disease (Vancheri et al., 2022). Besides, untreated stress can compromise patient care, as fatigued and stressed nurses may experience decreased focus, impaired decision-making, and increased likelihood of medical errors (Garcia et al., 2019). In Iraq, the healthcare system has faced numerous challenges due to decades of conflict, political instability, and underinvestment in medical infrastructure (Ghanim & Ibrahim, 2024; Ibrahim & Ibrahim, 2025). ICU nurses often work with limited resources, understaffed units, and a high patient acuity rate. These conditions elevate stress levels, yet little attention has been paid to the psychological well-being of nurses working in such critical care settings (Kamil & Hattab, 2023). ICU nurses in Iraq suffer from a variety of stressors (such as alarm fatigue, emotional exhaustion, anxiety, and moral distress). Previous investigation shows that more than 60% report moderate to high degrees of alarm fatigue and burnout when working long shifts in a case that encounters several emergencies **(Figure 1)**. Alarm fatigue and burnout among these ICU nurses are often attributed to a range of stressors that include patients dying frequently, lack of resources, burdensome patient loads, and ethical considerations when they are not able to care for

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patients fully (Yaas et al., 2023). Moreover, cultural expectations limited mental health resources and systemic healthcare constraints further compound the situation for Iraqi nurses, who are frequently left without adequate coping support mechanisms.

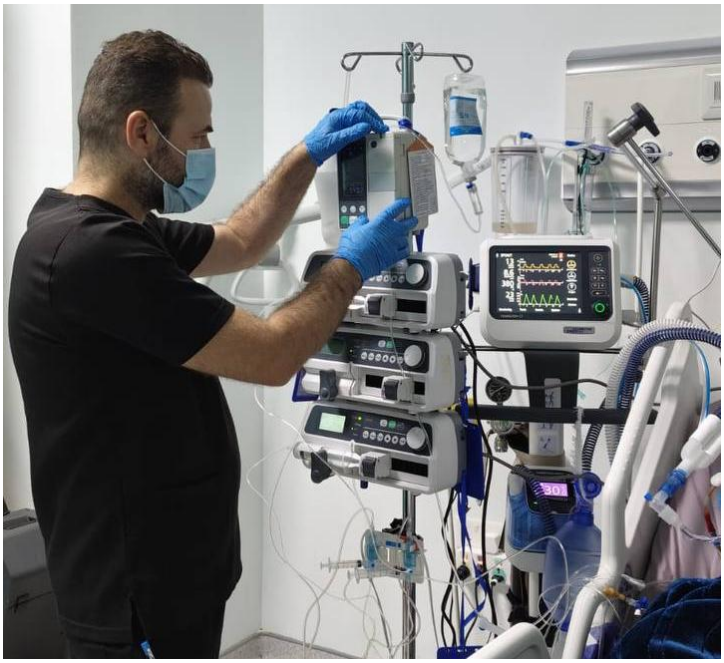


Figure 1. ICU nurses in Iraq (Documented by authors).

Understanding how ICU nurses in Iraq cope with occupational stress is essential for improving workforce wellbeing and patient care outcomes. Stress affects job satisfaction and nurse retention and compromises the quality of care for critically ill patients (Omer & Saleh, 2023). The government and healthcare policymakers in Iraq can contribute to mitigating occupational stress among nurses (Al Janabi & Chung, 2022). For example, implementing policies that can help reduce nurse burnout and turnover rates (Aryankhesal et al., 2019). Although numerous international studies have examined stress and coping among ICU nurses (Babkair et al., 2024; Chen et al., 2025; Meneguin et al., 2024; Quesada-Puga et al., 2024; Sikioti et al., 2023; Yao et al., 2022; Zindler-Wernet & Bailey, 1980), there is a notable lack of theoretical and context-specific research from the Middle East particularly Iraq. Most existing studies focus on general nursing populations or are purely descriptive that lacking a guiding theoretical framework. Moreover, no comprehensive studies have been found that utilize Lazarus and Folkman's transactional model to analyze coping strategies among ICU nurses in Iraq. This phenomenon leaves a critical gap in the academic and practical understanding of this psychological issue.

To fulfill the gap of the study, Lazarus and Folkman's Transactional Model of Stress and Coping was selected for this particular study because it provides a responsive and context-dependent perspective (Lazarus & Folkman, 1984). This model matches well with the unpredictable and high-intensity environment of ICU in Iraq. In the ICU setting, nurses find themselves in situations of constant exposure to critical and time-dependent situations (Ahmad et al., 2024). For example, perceiving patients in crisis and bracing their resources/skills because of the situation itself. All of these events may require continual psychological processing and adaptive behavioral reactions. Also, the model provides a conceptualization of stress as a function of cognitive appraisal - the evaluation of the situation regarding emerging and current threats; and, the coping resources the individual possesses (Lazarus & Folkman, 1984). The model is relevant to nurses in the ICU situation in Iraq that requiring them to assess challenging clinical situations through primary appraisal. In the secondary appraisal, nurses then decide on an approach based on their availability of support, knowledge, or emotional resources (Hamarash et al., 2025). Moreover, the model emphasizes stress, whether daily stress, work stress or traumatic stress, is unhealthy (Brosschot, 2017). Stress is the interaction between the individual and environment; parallel to the ethos of the daily demands of the nursing environment (Salomon et al., 2023). Considering the foregoing discussion, this study aims to explore the sources of stress and the coping mechanisms adopted by ICU nurses in Iraq using Lazarus and Folkman's Stress and Coping Theory. The study is critical as it proposes a relevant application of Lazarus and Folkman's theory to ICU nurses' population within the global nursing literature. Identifying coping strategies and stress triggers in Iraqi context could inform policy decisions, staff support interventions, and psychological training to ICU nurses.

Method

The study used a descriptive observational method and cross-sectional design for its data collection technique. The design was chosen because it allows for the systematic collection of data at a single point in time (Wang & Cheng, 2020). This makes it well-suited to assess the prevalence and characteristics of stress and coping among ICU nurses in Iraq. The design brings into line with the study's objectives with enabling the identification of common stressors, frequently used coping strategies, and the influence of individual and organizational factors—all without manipulating variables. Given the practical implication within hospital settings, the design offers a feasible and efficient method to generate context-specific insights related to mental health concern among nurses. The cross-sectional approach also supports

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the study's aim to provide baseline data that can be helpful in generating interventions or studies in Iraq. The study also grounded in Lazarus and Folkman's Model as framework. All the reasons for selecting the model have been discussed in the previous section above.

The study was conducted in the ICU of three major public hospitals in Mosul and Baghdad, Iraq such as Al Salam Teaching hospital, Ibn Sina Teaching hospital, and Ibn Al Nafeis Teaching Hospital. These hospitals were chosen due to their high patient volumes, critical care responsibilities, and representation of Iraq's public healthcare system. In the last two years all facilities admitted an average of 15.000 to 25.000 inpatient admissions per year (not counting large numbers of emergency room visits or outpatient visits). Patient volume is consistently high at these facilities for several reasons: they serve as tertiary referral centers for the region, typically receiving the most severe and complex cases. They also provide specialized services not commonly found in smaller or rural hospitals. Additionally, their presence in large, densely populated urban metropolitan areas makes them desirable locations, driving increased patient demand. Continuous conflict associated with injuries that require health care, inadequate medical healthcare systems in some outlying areas, and the public hospitals provided free care to patients also drive volume to these facilities.

The target population comprised registered ICU nurses employed in adult intensive care units at the selected hospitals. The research has criteria (inclusion and exclusion) used to select or determine respondents. The inclusion criteria as follows male and female, registered nurses with a minimum of six months of ICU experience, employed in an adult ICU during the data collection, and willing to participate voluntarily. The exclusion criteria, meanwhile, are nurses working in pediatric or neonatal ICUs and Interns, trainees, or nursing students. A convenience sampling technique was employed during the data collection process. That method was used as it is taken from a source that the researcher may easily access (Andrade, 2021). The researcher did not use a specific formula in determining the sample size. Due to hospital rosters and ethical approval limitations, 362 ICU nurses were approached. However, only 350 ICU nurses completed and participated by filling out the questionnaire that reaching a response rate of 96.68%. A self-administered structured questionnaire was used, consisting of three parts: demographic data form. The section gathered information on age, sex, marital status, years of experience, shift patterns, and educational background. The Nursing Stress Scale (NSS) as a validated instrument (Gray-Toft & Anderson, 1981) and adapted for ICU settings is used to measure sources and levels of occupational stress. The tool includes 34 items grouped into workload, death and dying, conflicts with physicians, and uncertainty concerning treatment. The Ways of Coping Questionnaire (WCQ) is a 66-item instrument designed to measure coping styles and is organized into problem-focused and emotion-focused styles (Lazarus & Folkman, 1988). Responses to both the WCQ and the NSS were rated in response to a 4-point Likert scale that was 0 (not used) to 3 (used a great deal). Both instruments were translated into Arabic and then back-translated into English to yield as much semantic equivalence as possible. The two nursing faculty authors, who were bilingual and experienced nurse researchers and psychometricians, completed the translations. An independent certified translator, who had no prior exposure to the English versions, performed the back-translation, and any discrepancies between the original English documents were resolved collaboratively. Content validity was established using five nursing experts who evaluated the instruments. The nursing experts were faculty members from the College of Nursing at the University of Mosul, the University of Nineveh, and had a PhD in nursing with over ten years of clinical and academic experiences in mental health and research in stress. Reliability for the Arabic versions was supported using a pilot study in which Cronbach's alpha coefficients were 0.88 for the NSS and 0.91 for the WCQ, both indicating excellent internal consistency.

Data collection occurred over a four-week timeframe in March 2025. Nurses were approached to participate at the end of their shifts or during their breaks in a way that did not intrude on their clinical duties. After obtaining consent, the participants received the self-administered questionnaires in sealed envelopes that ensured privacy and confidentiality. The combined questionnaire had a total of 94 total items: 28 items from the NSS and 66 items from the WCQ. On average, participants took about 20–25 minutes to complete the full set of questionnaires. The completed forms were returned anonymously using locked collection boxes at each participating hospital's ICU nursing stations. The data collection was managed by a research assistant who was trained, and whose name did not appear as an author on the manuscript. The research assistant was responsible for providing the materials, clarifying any questions participants had, and ensuring the completed forms were handled ethically.

Ethical approval was obtained from the Institutional Review Board (IRB) of Nineveh University, College of Nursing, Iraq (CCMRE-Nur-23-7, on 28-10/2024). Official permissions were also secured from hospital administrators. Before study begin, all the participants received written and verbal explanations of the study's purpose and process. To protect the participants' confidentiality, participation on the part of participants was not mandatory. Still, anonymity was not used in the study unless requested by the participants. Identifying information was not collected. Completed data were recorded in an encrypted program on the principal investigator's password protected computer that only he can access.

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In line with ethical research, data collected in the study will be kept for five years for academic auditing purposes, after which it will be permanently deleted to ensure the privacy and protection of participant information. Data was entered and analyzed using SPSS version 26. Descriptive statistics such as mean, Standard Deviation (SD), frequencies, and percentages) were used to summarize demographic data among the participants. Pearson correlation was applied to explore the relationship between stress levels and coping strategies. Independent t-tests and ANOVA were used to assess differences in stress and coping strategies based on demographic variables. The significance level of $p<0.05$ was considered statistically significant consideration.

Results

A total of 350 ICU nurses participated throughout the study. The majority of the participants were female (60%), aged between 30 and 39 years (45.7%), and married (60%). Most participants held a bachelor's degree in nursing (68.6%), and nearly half (45.7%) had 2–5 years of ICU experience **(Table 1)**. The NSS analysis indicated that ICU nurses experienced moderate to high stress levels with a mean total score of 82.4±14.6. The most frequently reported stressors were high workload and patient acuity (mean=4.2±0.8), dealing with death and dying (mean=4.0±1.0), lack of administrative support (mean=3.8±0.9), and interpersonal conflict with physicians (mean=3.6±0.7) **(Table 2)**. Coping responses were assessed using the WCQ. Nurses demonstrated a higher tendency toward problem-focused coping strategies (mean=72.1±11.4) than emotion-focused strategies (mean=64.5±13.2) that reflecting a constructive approach to managing occupational stress **(Table 3)**. The table shows a negative correlation between stress and problem-focused coping (r=–0.48, $p<0.001$). In contrast, a positive correlation was observed between stress and emotion-focused coping (r=0.41, $p<0.001$). These results suggest that greater reliance on problem-focused strategies is associated with lower stress levels **(Table 4)**. Nurses with less than 2 years of experience reported the highest stress (mean=86.7±13.2), followed by those with 2–5 years (mean=82.1±14.5), and over 5 years (mean=78.3±15.1). The differences were statistically significant ($p=0.007$) **(Table 5)**. Female nurses had higher stress levels (mean=84.3±13.9) than male nurses (mean=79.1±15.3), with a statistically significant difference ($p<0.05$) **(Table 6)**. Coping strategies varied by educational attainment. Nurses with master's degrees had the highest scores for problem-focused coping (78.4±10.2) and the lowest for emotion-focused coping (60.2±11.6). Significant differences were observed across education levels ($p<0.05$) **(Table 7)**. Nurses on rotating shifts reported higher stress scores (mean=85.5±12.7) than those on fixed shifts (mean=77.8±15.6), with a statistically significant difference ($p<0.05$) **(Table 8)**.

Table 1. Demographic characteristics of participants.

Variables	Frequency (n)	Percentage (%)
Sex		
Female	210	60
Male	140	40
Age		
Age 20–29 years	120	34.3
Age 30–39 years	160	45.7
Age > 40 years	70	20
Marital status		
Single	130	37.1
Married	210	60
Widowed/divorced	10	2.9
Clinical experiences		
ICU Experience <2 years	90	25.7
ICU Experience 2–5 years	160	45.7
ICU Experience >5 years	100	28.6
Education		
Diploma	80	22.9
Bachelor degree	240	68.6
Master degree	30	8.6

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Table 2. Factors leading stress.

Factors	Mean	SD
High workload and patient acuity	4.2	0.8
Dealing with death and dying	4	1
Lack of administrative support	3.8	0.9
Interpersonal conflict with physicians	3.6	0.7

Table 3. Coping strategies used by ICU Nurses.

Coping strategies	Mean	SD
Problem-focused	72.1	11.4
Emotion-focused	64.5	13.2

Table 4. Stress and coping strategies.

Paired variables	*r*	*p*
Stress vs Problem-focused coping	–0.48	<0.001
Stress vs Emotion-focused coping	0.41	<0.001

Table 5. Comparison of stress levels by years of ICU experience.

Years of ICU experiences	Mean	SD	*p*
< 2 years	86.7	13.2	0.007*
2–5 years	82.1	14.5	
> 5 years	78.3	15.1	

*ANOVA test; statistically significant difference (p<0.05).

Table 6. Stress scores by sex.

Sex	Mean	SD	*p*
Male	79.1	15.3	0.018*
Female	84.3	13.9	

*****Independent t-test; statistically significant (p<0.05).

Table 7. Coping strategy scores by educational level.

Educational level	Problem-focused coping (Mean±SD)	Emotion-focused coping (Mean ± SD)	*p*
Diploma	65.9±11.5	70.1±12.4	0.003*
Bachelor	71.2±10.8	63.9±13.1	
Master	78.4±10.2	60.2±11.6	

*One-way ANOVA; significant difference across education levels (p<0.05).

Table 8. Stress scores based on work shifts.

Work shifts	Mean	SD	*p*
Fixed shifts	77.8	15.6	0.004*
Rotating shifts	85.5	12.7	

*****Independent t-test; statistically significant (p<0.05).

Discussion

The findings provide compelling evidence that ICU nurses experience moderate to high levels of stress due to the intense emotional, cognitive, and physical demands of their work environments **(Figure 2)**. The outcome agrees with the study's core hypothesis: that the stress experienced by ICU nurses is not merely a result of workload but is also shaped by the interaction between perceived threats (primary appraisal) and coping resources (secondary appraisal). The results are supported by previous research reported ICU nurses working in higher acuity settings had notably increased levels of stress, based on the nature of the unpredictability of patients' conditions and the emotional burden carried by nurses (Schaller et al., 2022). A study explained that ICU nurses often suffer from psychological distress based on the ethical

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dilemmas, dying patients, and bad staffing levels (Al Maqbali et al., 2021). Similarly in the Middle East, a study found that ICU nurses from Saudi Arabia report chronic stress related to resource and material constraints crowded patient-to-nurse ratios, and exposure to traumatic events (Babkair et al., 2024). Thus, these studies demonstrate that the outcomes of ICU nurse stress are multi-layered and involve the influences of environmental stress and unique cognitive appraisals. The results demonstrated that nurses who employed problem-focused coping strategies—including time management, peer support, and proactive planning—reported lower levels of stress than those who used emotion-focused strategies such as avoidance or emotional withdrawal. The finding conforms with a study reported that the main coping strategies utilized by emergency and critical care nurses were problem solving and positive reappraisal (Isa et al., 2019). Nurses who used more escape-avoidance behaviors reported poorer health outcomes. They also emphasized the importance of promoting and fostering positive coping strategies through targeted interventions and stress management; especially for staff who frequently utilize negative coping. That study reinforces the importance of adaptive coping strategies to help manage occupational stress. The point is consistent with Lazarus and Folkman's theoretical framework, which posits that adaptive coping strategies are more effective in managing stress, particularly in high-stakes clinical environments (Folkman & Lazarus, 1988).



Figure 2. ICU nurses in Iraq (Documented by authors).

What's more, the study confirmed that nurses who adopted problem-focused coping strategies—such as time management, seeking peer support, and planning—demonstrated lower stress levels than those relying on emotion-focused strategies like avoidance or emotional withdrawal. The outcome reinforces the theoretical claim that adaptive coping mechanisms, particularly in situations like those faced in ICU settings, bring about better psychological outcomes. The study findings harmonized with study that reported lower emotional exhaustion and burnout among ICU staff who used task-oriented coping strategies (González-Morales et al., 2012). Similarly, study found that avoidance-based coping was linked to heightened psychological distress among nurses (Spaan et al., 2024). These results corroborate earlier finding showing nurses lack adequate psychological support can lead occupational stress in Iraq (Jadoo et al., 2015). The results share commonalities with broader Middle Eastern studies that describe similar challenges related to under-resourced healthcare settings, staff shortages, and high patient loads (Alharbi & Alshehry, 2019; Alkouri et al., 2025; Babkair et al., 2024; Vahedian-Azimi et al., 2019). However, the Iraqi context presents unique stressors which add layers of complexity rarely seen in studies from more stable regions. For example, political instability, infrastructural constraints, and cultural stigma surrounding mental health. The study also identified several socio-demographic factors that influenced stress levels and coping strategies among ICU nurses. Because of this, education emerged as a critical factor with nurses holding higher academic qualifications more likely to adopt effective problem-solving coping mechanisms. This may be due to their clinical expertise, leadership training, and familiarity with evidence-based practices which are often emphasized in advanced academic programs. The findings are in line with a study explained that oncology nurses at a specialized cancer center had a positive relationship between work stress and coping strategy and that coping strategies influenced nurses' health-related quality of life moderately (Al-Ruzzieh & Ayaad, 2021). Notably, education was identified as an important demographic factor influencing the use of effective coping strategies. Nurses with higher education, for instance, showed more developed problem-solving skills.

Sex also influenced stress experiences for nurses. Female nurses in the study reported more stress than male nurses. This difference may be related to emotional engagement in caregiving, along with socialization that requires both family and work obligations (Hasan & Tumah, 2019). Another issue adding to the complexity was the level of experience (Awad et al., 2019). This study recorded that nurses with less than two years in an ICU demonstrated more stress levels in contrast to nurses, with more experience. The level of experience illustrates the importance of structured mentoring and orientation programs to build resilience, confidence, and coping skills as graduate nurses transition into the high-

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stakes ICU context. Whereby, the state of healthcare in Iraq is disproportionally impaired for effective stress management. Most hospitals are poor, under-staffed, with high patient acuity levels, and the presence of unstable working conditions (Fathi & Ibrahim, 2023). Cultural barriers which nurture norms against help-seeking for mental health support may have prompted nurses to minimization their emotional distress and encourage a reliance on informal social supports and avoid stress. Organizational culture also emerged as a significant contributor to stress levels. For instance, lack of managerial support in conjunction with interprofessional conflicts with physicians highlights the need for enhancing interprofessional communication and leadership training (Tong et al., 2022). Consequently, advancing collaborative care models and approaches to inclusive decision-making could support a more psychologically and physically safe work environment in hospitals (Reist et al., 2022).

Hospital administrators and policymakers should take initiative to alleviate the stressors encountered by nursing staff, at times these stressors are heightened during hours of high intensity as seen in the ICU (Cohen et al., 2023). One major area to invest in is psychological support services that offer nurses safe access to talk about their feelings and provide access to counselling, coping resources, and mental health services (Liu et al., 2025). Access to these supportive services could help alleviate negative psychological and emotional experiences that could prevent burnout. Improving staffing ratios along with fair distribution of workload more generally is also a pivotal tactic (McHugh et al., 2021). Adequate staffing alleviates the psychological load of nursing personnel while improving patient care and positively impacting patient safety (Li et al., 2024). Incorporating interdisciplinary collaboration can also help reduce workplace conflict as well as improve team dynamics (Warren & Warren, 2023). When nurses, physicians, and other allied healthcare professionals collaborate, it fosters an efficient and safe environment of care, which is healthier (Taberna et al., 2020). Including knowledge about mental health literacy and coping strategies bolsters ICU nurses with health literacy skills, which provides them skills and knowledge to cope (Alharbi & Alshehry, 2019). The elements above should be included during pre-service education and in-service training to encourage a psychologically healthy and resilient nursing workforce in hospitals.

To enhance the coping capacity of ICU nurses, several educational and professional strategies should be employed. Integrating stress management, emotional intelligence training, and resilience into nursing degree curricula. By teaching these components early in education it creates strong foundation of emotional and psychological tools to respond to nursing practice challenges in demanding clinical settings. In addition to developing training, should be offered ongoing education modules regularly in Iraq that address ICU-specific stressors. These modules can deal with the real-world obstacles nurses face, such as managing a critically ill patient, ethically confronting difficult family members, and dealing with patient loss and developing resilience. Further enhancing the confidence and preparedness of nursing students through early clinical exposure, and supervision by experienced mentors (Mikkonen et al., 2022). Immersing nursing students in clinical practicum allows for time to nurture practical skills, develop comfortable skills in a hospital environment, and slowly build resilience in practice. Furthermore, policymakers have the means to offer guidance on safe nurse-to-patient ratios, where inequitable workloads are lessened (Kim et al., 2024). Also, incentives can be offered to nurses for continuing education and professional development can lead to greater job satisfaction (Daniels et al., 2019). The government can definitely partner with nursing associations, and other relevant partners to develop evidence -based recommendations to support efforts of lessening occupational stressors and challenges present in ICU. Lastly, healthcare recommendations can promote the ongoing health of nurses, and prioritize the mental and health well-being of nurses as there is direct correlation to care quality.

The analysis includes strengths that augment its reliability and importance. For instance, it employed a theoretical framework—Lazarus and Folkman's Transactional Model of Stress and Coping—which provided a robust foundation for analyzing stress and coping mechanisms among ICU nurses in Iraq. This is the first documentation in Iraq that employs the model in relation to nurses working in the ICU. As such, the model hasn't been used in a Middle Eastern country, particularly Iraq, where nurses face unique challenges due to conflict, limited resources, and sociocultural challenges. It is uniquely positioned to offer new evidence on the complexities and solutions for better supporting ICU nurses. Additionally, the study achieved a high response rate that indicating strong engagement from participants and increasing the reliability of the data. Another strength lies in the inclusion of a wide range of demographic variables which allowed in-depth analysis of the factors influencing stress and coping. However, the study also has certain limitations that should be considered when interpreting the results. For example, the reliance on convenience sampling may limit the generalizability of the findings to broader populations of nurses worldwide. Also, the data were collected through self-reported measures which could introduce biases such as social desirability or inaccuracies in recall. Despite these limitations, the findings of the study support several evidence-based recommendations aimed at improving clinical nursing practice in ICU. One key recommendation is the development and implementation of resilience-building and

stress management for ICU nurses in Iraq. Lastly, implementing regular and structured debriefing sessions following critical incidents is recommended to provide nurses with opportunities to reflect their experiences, receive peer and managerial support. These strategies can improve performance, and retention of nurses in intensive care environments.

Conclusion

The study underscores the high levels of occupational stress experienced by ICU nurses in Iraq and the importance of adaptive coping mechanisms. Guided by Lazarus and Folkman's theoretical model, the findings reveal that problem-focused strategies are more effective in managing stress than emotion-focused strategies. Identifying key stressors and coping patterns contributes insightful findings for developing nurse-centered interventions to improve psychological well-being, job satisfaction, and quality of care. Hospitals need to provide training or evaluation of the psychological status of ICU nurses to prevent the negative impact of stress. Future studies should ideally collaborate with Iraqi nursing associations or the government to reduce stressors among ICU nurses to a minimum.

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AI statements

All the part of this manuscript was prepared without using any generative text artificial intelligence.

Author's declaration

All the authors mentioned in the manuscript fully contributed to the study and publication preparation.

Availability of data and materials

All data are available from the authors when requested.

Competing interests

The authors declare no competing interest.

Ethical clearance

The study obtained approvals from Institutional Review Board (IRB) of Nineveh University, College of Nursing (CCMRE-Nur-23-7, on 28-10 /2024).

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Authors' insight

Key points

- The study investigates the experiences of ICU nurses working in Iraq, a context that may involve unique stressors due to healthcare conditions and regional challenges.
- The study examines both the stress experienced by these nurses and their coping mechanisms that outlining a conclusion into how they manage their high-pressure work environment.
- The research uses the well-established psychological framework of Lazarus and Folkman, which conceptualizes stress as a dynamic interaction between individuals and their environment.

Emerging nursing avenues

- What are the most common sources of stress for ICU nurses in Iraq that can be identified in this observational study?
- How do different coping strategies, according to the Lazarus and Folkman model, affect the nurses' ability to manage stress?
- What implications do the findings have for improving support systems for ICU nurses in Iraq to enhance their well-being and job performance?

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