ORIGINAL ARTICLE

AL-ANBAR MEDICAL JOURNAL
Anb. Med. J. 21(4): 269–275, 2025

Assessment of Workplace Burden on Nursing Staff Well-being at Intensive Care Unit

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(Received : 3 May 2025; Accepted : 19 July 2025; First published online: 1 October 2025)

ABSTRACT

Background: In recent years, employee well-being has emerged as a critical factor influencing workplace efficiency and productivity. Physically and mentally healthy employees tend to be more productive and are better equipped to provide high-quality services.
Objectives: To evaluate the impact of workplace burden on the health of nursing professionals working in intensive care units (ICUs).
Materials and methods: This research was conducted in four hospitals in Al-Nasiriyah city, southern Iraq, from October 2024 to January 2025 using a cross-sectional study design. The study population consisted of 127 ICU nurses currently employed at the selected hospitals. A purposive sampling technique was employed. Data were collected using the Symptom Checklist-90-Revised (SCL-90-R) questionnaire.
Results: Out of 127 nurses, 70 were male (55.1%), with the majority aged 39-49 years (33.9%). Approximately 33.1% reported experiencing frequent physical health impacts from their workplace, and 48% reported regular psychological effects. Factor analysis showed strong symptom loadings (extraction values > 0.600) across physical (e.g., fatigue, back pain) and psychological (e.g., panic, low self-worth) domains (P-value $= 0.001$). Age and education level significantly predicted physical burden (P-values $= 0.001$ and 0.018, respectively), while sex, experience, and patient loss were not (P-value > 0.05). Age was the only significant predictor of psychological burden (P-value $= 0.001$).
Conclusion: The findings underscore the significant challenges faced by ICU nurses, including physical strain, emotional exhaustion, and burnout, all of which can profoundly affect their overall health and well-being. Addressing these issues requires a comprehensive approach that integrates both individual-level and organizational-level interventions.
Keywords: Health; Physical Burden; Well- being; Psychological burden; Intensive care unit.

DOI: 10.33091/amj.2025.159806.2228

INTRODUCTION

Patients in intensive care units (ICUs) present unique and significant challenges that place immense physical and psychological demands on nurses [1]. Workplace burnout may happen as a result of a combination of many factors, like intense workloads, prolonged work shifts, continuous exposure to critical emergencies, and the emotional consequences of providing care for those with critical illnesses. Broad prevalence of job discontent, burnouts, and mental health problems among ICU nurses is highlighted in recent research; all these issues negatively influence patient care quality in addition to the whole healthcare system [2, 3].

Nurses in intensive care units face chronic stress due to several contributing aspects that exacerbate the requirements of their roles. These aspects include intense workloads, prolonged work shifts, continuous exposure to critical emergencies, and the emotional consequence of providing care for those with critical illnesses in addition to their families.

According to ICUs nurses, the most extremely stressful aspect of their work is "managing patient deaths," while the second aspect is concerned with the time of patients' discharge, often limited by shortages of staff or workload pressure levels. Additionally, the profound emotional burden that is present in critical care settings in comparison with surgical counter-

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parts, nurses who work in specialized areas like hematology and oncology frequently converge emotionally charged conditions that are sensed as significantly more stressful [4].

They also face encounter difficulties in new therapeutic and technologies adaptation, besides management of unrealistic expectations from seriously ill patients and their relatives, all of these exacerbate nurse's workload and psychological burden [5].

Numerous stressors resulting from providing the care by ICU nurses lead to serious physical and psychological consequences. According to studies, the psychological and emotional support for ICU nurses remains restricted despite the critical nature of this field. Frequent experience of these frontline health care providers to psychological, emotional, and physical stress, contributor to job dissatisfaction as well as low morale, which can negatively impact the quality of patient care [6].

Burnout, anxiety, and depression are the common psychological conditions that are reported among ICU nurses. The psychological and physiological strain inherent in ICU nursing is a central concern when applying theoretical frameworks in this context. Due to nursing work directly impacting patients' survival, many researchers proposed that ICU nurses are more susceptible to stress and occupational burnout more than their counterparts in other hospital settings [4]. Absenteeism, decreased job satisfaction, and greater risk of career burnout are strongly associated with psycho-social hazards that face the nursing staff of the ICU [7].

However, ICU nurses challenges, especially those related to workplace stress and burden, can be effectively treated only by evidence-based strategies. Implementation of such strategies is considered an essential issue for the promotion of both physical and psychological nurses' well-being. Numerous approaches have been planned to minimize workplace burden among ICU nurses [2, 8].

Delivering transparent and effective patient care can be achieved by balancing acceptable workloads and ensuring appropriate staffing levels. Providing access to mental health and counselling services can support ICU nurses in coping with the emotional demands of their work. The numerous challenges faced by intensive care nurses highlight the urgent need for comprehensive solutions that not only improve healthcare delivery but also foster resilience and well-being among nursing staff.

This study was undertaken for several key reasons: to enhance the overall quality of the healthcare system, reduce medical errors caused by physical and psychological stress, improve the well-being of healthcare professionals, and inform evidence-based workplace regulations. Therefore, this research aimed to evaluate the extent of workplace burden on the health of nursing professionals working in ICUs.

MATERIALS AND METHODS

This research was conducted in four hospitals located in Al-Nasiriyah City, southern Iraq, namely Al-Hussein Teaching Hospital, Al-Nasiryah Teaching Hospital, Al-Nasiryah Heart Hospital, and Bent Al-Huda Hospital, from October 2024 to January 2025, using a cross-sectional study design. The study included two comprehensive teaching hospitals and two specialized healthcare facilities. These hospitals were selected due to their wide range of services and high patient volume, making them suitable for evaluating workplace burden among ICU nurses.

The study population comprised all ICU nursing staff working in these hospitals who were available and consented to participate during the data collection period.

The inclusion criteria encompassed all ICU nurses with a minimum of one month of ICU experience and who had provided full-time clinical care at the hospital for at least six months. The exclusion criteria included temporary or volunteer staff with less than six months of employment, as well as those who did not return the completed questionnaire. A total of 127 ICU nurses currently employed at the four selected comprehensive and specialty hospitals constituted the study population. Purposive sampling was used, and data were collected through self-administered questionnaires.

Data were collected using the Symptom Checklist-90-Revised (SCL-90-R) questionnaire [9]. The original English version was translated into Arabic using a web-based translation service to ensure consistency. A pilot study consisting of thirty nurses was conducted prior to the main study to validate the translation and to estimate the time required for participants to complete the questionnaire. To ensure linguistic accuracy, a back-translation process was carried out, translating the Arabic version back into English for comparison.

The questionnaire consisted of three main sections: the first section captured participants' demographic data, while the second and third sections assessed physical and psychological burden, respectively. The statistical analysis comprised three primary components. Descriptive statistics were used to summarize the demographic and clinical characteristics of the sample. Reliability and validity of the questionnaire were evaluated using factor analysis and Cronbach's alpha. Regression analysis was conducted to identify significant predictors of physical and psychological burden and to assess the strength of associations between independent and dependent variables. Statistical significance was determined at a 95% confidence interval (CI) with a P-value < 0.05. All analyses were performed using IBM Statistical Package of Social Sciences (SPSS), version 29.0 (IBM Corp., Armonk, NY, USA).

RESULTS

The research data that male personnel (n = 70, 55.1%) outnumber females (n = 57, 44.9%) within the ICU nursing staff. The majority of ICU nurses belong to the age group between 39 to 49 years (n = 43, 33.9%). The highest level of education among participants is a diploma (n = 53, 41.7%). The surveyed nurses spent approximately 2 years working in the ICU (n = 106, 83.5%). The number of staff who have witnessed patient fatalities at work equals 65 (51.2%), and such tragic experiences tend to increase their psychological stress levels (Table 1).

The reliability scores from Cronbach's Alpha Coefficient in Table 2 show good internal consistency with 0.839 for physical burden items and 0.872 for the psychological burden items. Overall reliability at 0.921 indicates exceptional measurement consistency for the 25 items derived from physical (8 items) and psychological (17 items) burden assessment instruments. Statistical analysis indicates that physical burden and psychological burden share a relationship of 0.846 (P-value = 0.001).

Table 3 clarifies that 42 (33.1%) of nursing staff have usually a negative impact of work place on their physical health, and 61 (48%) have usually a negative impact on their psychological health.

http://doi.org/10.33091/amj.2025.159806.2228

Table 1. Demographic characteristics of the 127 participants*.

Variables	Frequency	Percent
Gender		
Male	70	55.1
Female	57	44.9
Age		
18–29	29	22.8
29–38	35	27.6
39–49	43	33.9
Above 50	20	15.7
Level of education		
Diploma	53	41.7
Bachelor	51	40.2
Master	23	18.1
Experience in ICU		
Two years	106	83.5
Three years	10	7.8
Four years	11	8.7
Lost patients during work		
Yes	65	51.2
No	62	48.8

* ICU: Intensive care unit

Table 2. Factors Cronbach alpha Items Correlation coefficient.

Factors	Cronbach alpha	Items	Correlation coefficient
Physical	0.839	8	
Psychological	0.872	17	0.846 (P-value 0.001)
Overall	0.921	25	

Table 3. Overall assessment of workplace burden on nursing health.

Overall score	Frequency	Percentage
Physical Burden		
Never	25	19.7
Rare	7	5.5
Sometimes	39	30.7
Usually	42	33.1
Always	14	11.0
Psychological Burden		
Never	10	7.9
Rare	23	18.1
Sometimes	18	14.2
Usually	61	48.0
Always	15	11.8

The factor analysis of Initial Extraction Values was ($>$ 0.600) at P-value equal to 0.001 displaying significant loadings across different symptoms that cover physical conditions including fatigue and back pain along with psychological symptoms like panic feelings and low self-worth (Table 4).

The total variance explained in Table 5 and Figure 1 accounts for 84.822% of the overall variability, highlighting the significant role of these symptoms in capturing the burden experienced by nursing workers.

Table 4. Factor analysis for nursing staff well-being.

Statement	Initial Loading	Extraction Loading
Do you suffer from constant headaches, dizziness, fatigue, or fainting?	1.000	0.934
Feeling lower back pain	1.000	0.765
Did you feel Nausea or stomach (abdominal) cramps	1.000	0.939
Feeling pain in the heart or chest	1.000	0.688
Feeling difficulty breathing	1.000	0.770
A feeling of a closed throat and inability to swallow	1.000	0.611
Feeling weak all over your body (you are tired)	1.000	0.951
Feeling jittery and trembling	1.000	0.927
Feeling uncared for your surroundings	1.000	0.921
Feeling sluggish and losing energy	1.000	0.910
Feeling quickly annoyed and aroused	1.000	0.975
Fear, sudden terror, and panic all the time	1.000	0.876
Loss of importance in things	1.000	0.890
Loss of sexual desire and interest	1.000	0.673
Loss of hope for the future	1.000	0.961
I cry easily	1.000	0.618
I feel like I am being arrested, held, or shackled	1.000	0.966
I criticize myself when I do some things	1.000	0.820
Feeling lonely and isolated	1.000	0.934
Feeling useless	1.000	0.796
I have thoughts of throwing my life away	1.000	0.822
Nervousness and internal tremors	1.000	0.947
Desire to criticize others	1.000	0.867
Feel that others around me are unfriendly	1.000	0.911
I have strange fantasies and ideas	1.000	0.852

The 34.4% R^2 value demonstrates that age and other demographic variables, along with the model fit, account for 34.4% of psychological burden variability. Older nurses display higher levels of psychological stress according to the analysis (P-value = 0.001). The analysis of education level as a predictor for psychological burden failed to show any meaningful relation with this outcome. The data from ICU experiences did not establish any significant findings (P-value = 0.059). The study results indicated no statistical (P-value $>$ 0.05) relationship between lost patients and psychological burden (Table 7).

DISCUSSION

The results offer substantial information regarding both the physical and psychological burdens experienced by ICU nurses, as well as their associations with demographic variables. Factor analysis revealed significant factor loadings of $>$ 0.600 across various symptoms related to physical and psychological health issues. The extracted factors accounted for 84.93% of the total variance, indicating the comprehensive and substantial burden borne by ICU nursing staff. Alongside physical symptoms, psychological indicators such as feelings of loneliness, helplessness, and hopelessness were prominent, underscoring the emotional toll of ICU work. A strong posi-

Table 5. Distribution of patients' demographics according to the studied groups*.

Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative%	Total	% of Variance	Cumulative%	Total	% of Variance	Cumulative%
1	9.661	38.644	38.644	9.661	38.644	38.644	6.926	27.705	27.705
2	3.315	13.260	51.904	3.315	13.260	51.904	3.375	13.498	41.203
3	2.326	9.303	61.207	2.326	9.303	61.207	2.621	10.485	51.688
4	1.836	7.345	68.553	1.836	7.345	68.553	2.388	9.551	61.239
5	1.605	6.419	74.971	1.605	6.419	74.971	2.234	8.937	70.175
6	1.304	5.215	80.187	1.304	5.215	80.187	1.926	7.705	77.880
7	1.159	4.636	84.822	1.159	4.636	84.822	1.735	6.942	84.822

* Extraction Method: Principal Component Analysis.

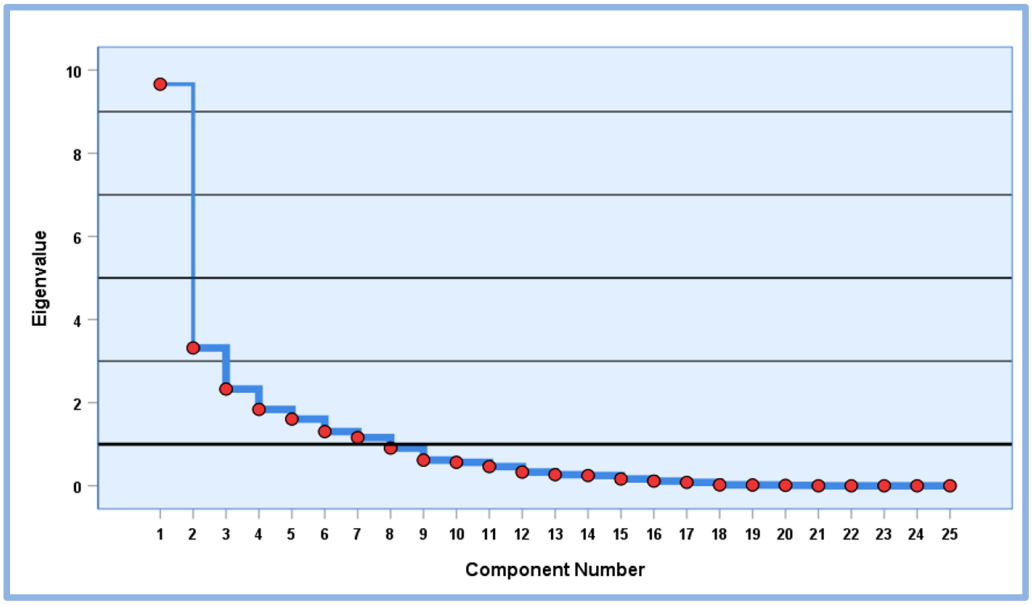

Figure 1. Scree plot for total variance.

Table 6. Multiple linear regression predicting the physical burden of demographic variables*.

	B	Std. Error	Sig.	95.0% CI for B	Collinearity Statistics	
					Tolerance	VIF
(Constant)	14.707	3.257	0.000	8.259–21.156		
Sex	10.484	1.040	0.156	-0.576–3.543	0.947	1.056
Age	40.129	0.519	0.001*	3.102–5.156	0.928	1.078
Level of education	-1.657	0.691	0.018*	-3.025– -0.289	0.979	1.021
Experience in ICU	10.336	0.869	0.127	-0.385–3.056	0.928	1.077
Lost patients experience	-0.018	1.021	0.986	-2.039–2.004	0.973	1.028

* B: Standardized coefficients, Std. Error: Standard Error of the mean, Sig: Significant, CI: Confidence interval, VIF: Variance Inflation Factor.

tive correlation (r = 0.846, P-value < 0.001) was observed between physical and psychological burden, emphasizing their interrelated nature and the compounded effect of workplace stress on nurses. These findings are consistent with previous research, which has shown that exposure to aggression contributes significantly to both physical and psychological strain among nurses [10]. Furthermore, high stress levels have been reported to negatively affect nurses' quality of life and compromise their caregiving behaviors [11]. Specifically, ICU nurses are subject to intense occupational stressors that play

http://doi.org/10.33091/amj.2025.159806.2228

Table 7. Regression on psychological burden with demographic characteristics*.

	B	Std. Error	Sig.	95.0% CI for B	Collinearity Statistics	
					Tolerance	VIF
(Constant)	47.277	5.587	0.000	36.215–58.339		
Sex	1.023	1.785	0.567	-2.510–4.556	0.947	1.056
Age	6.970	0.890	0.001*	5.209–8.732	0.928	1.078
Level of education	-1.585	1.185	0.184	-3.931–0.761	0.979	1.021
Experience in ICU	-2.843	1.490	0.059	-5.794–0.107	0.928	1.077
Have you lost patience during your work?	0.888	1.752	0.613	-2.580–4.355	0.973	1.028

* ICU: Intensive care unit, B: Standardized coefficients, Std. Error: Standard Error of the mean, Sig: Significant, CI: Confidence interval, VIF: Variance Inflation Factor

a major role in the psychological distress commonly reported in this population [12].

It has also identified age as a predictive factor (P-value = 0.001) equally on the physical and the psychological burden of ICU nurses. Nurses aged 39-49 years reported the highest levels of burden. This variation may be attributed to cumulative exposure to workplace stressors over time, the physical demands of prolonged patient care, and potentially reduced physical resilience with advancing age. The positive regression coefficients (B = 4.129 for physical burden; B = 6.970 for psychological burden) indicate a marked increase in reported burden with each successive age category. These findings are consistent with those of Wareth and Eltaybani (2018), who observed moderate to high stress levels among newly practicing ICU nurses, with key stressors including death and dying, heavy workloads, and inadequate preparation [13]. These factors contribute to early-career stress, yet also suggest that accumulated stress can persist or worsen with time [14]. Conversely, the current results differ from those of Zanjani et al. (2021), who reported no significant association between age and nurse well-being. The discrepancy may be due to differences in age categorizations, cultural settings, or institutional factors between studies [15].

Education level demonstrated a significant inverse relationship with physical burden (P-value = 0.018), with higher educational attainment associated with lower levels of physical burden (B = -1.657). This suggests that advanced education may equip nurses with better knowledge of ergonomics, self-care strategies, and efficient resource utilization, all of which may contribute to improved physical well-being. However, this outcome differs from the results provided by Shwn-Huey Shieh (2016 [16], and this may be because of the level of education that the two studies focused on. Conversely, the association between level of education and psychological burden did not reach any statistically significant level (P-value = 0.184), possibly implying to the fact that more education does not automatically guarantee against psychological ramifications of working in ICUs. The current discovery is congruent with the factual evidence that the high level of professional expectations, less time on the patient care, lack of the required skills, and the lack of social support may be the factors which may cause the psychological distress to the nurses without any difference in their educational statuses [17].

Concerning psychological burden, the more experienced nurses felt less psychologically stressed (P-value = 0.059, B = -2.843), but the relationship was not statistically significant. Although this was statistically insignificant, a trend emerged indicating that, with increased clinical experience, psychological resilience and effective coping strategies were achieved over time. Furthermore, neither physical nor psychological burden showed a significant association with sex, indicating that both male and female nurses are similarly affected by the ICU work environment. This finding aligns with some previous studies that reported higher levels of psychological distress and fear among female nurses compared to their male counterparts [18]. Working in ICUs is widely recognized as emotionally demanding and is frequently linked to long-term absenteeism and professional attrition, as nurses may take extended leave or exit the field to safeguard their health [19]. Additionally, caregiving responsibilities significantly impact nurses' quality of life across social, psychological, and physical domains [20, 21].

Additionally, 51.2% of the participants reported experiencing patient fatalities during their work. However, this variable did not significantly predict either physical or psychological burden. This finding contrasts with previous literature, which often highlights the emotional toll of patient deaths as a major contributor to nurse distress and burnout. In the present study, the absence of a significant association may indicate that the emotional impact of patient deaths is either less pronounced or more effectively managed by ICU nurses. Nurses in this context may have developed coping mechanisms or operate within a cultural or institutional environment that helps buffer the psychological impact of such experiences. This divergence from existing evidence may reflect unique cultural, professional, or environmental factors specific to the study setting. The findings are inconsistent with earlier studies that documented the psychological consequences of patient loss among nurses [22, 23].

The regression models explained 40.7% of the variance in physical burden and 34.4% of the variance in psychological burden among ICU nurses. While these results reflect a moderate explanatory power, they also indicate the existence of additional influencing factors not captured by the current demographic variables. These may include organizational elements (e.g., nurse-to-patient ratios, leadership support), personal characteristics (e.g., resilience, coping mechanisms), and broader contextual elements (e.g., cultural perceptions of healthcare work). The strength of the statistical models aligns with previous findings, which emphasize that understanding nurses' ability to meet patient needs requires consideration of the psychosocial work environment [24]. Several contributing factors to increased burden include younger age, higher educational attainment, inadequate social support, high risk of

exposure to infectious diseases, and working under resource-constrained and high-pressure conditions [25]. Moreover, the research studies indicated that about 20% of nursing professionals have high levels of compassion fatigue, and 7.6% of them showed a very distressed profile on psychology. At-risk nurses tend towards be much higher in stress and depression and much lower in compassion satisfaction. The high stress levels among ICU nurses have also been attributed to the higher risk of making errors in patient care in the critical areas [26].

Such results indicate the necessity of age-specific interventions to deal with the challenges connected with the ageing nursing workforce. The plans to minimize physical load must become part of the education and training procedures, focusing on ergonomics and prevention. At the same time, the psychological support system needs to be reinforced and integrated to be available to everyone, regardless of their level of education. One of the most significant measures that can enhance the overall well-being of ICU nurses is the need to create supportive working conditions, taking into consideration their specific needs and the stressors that affect them due to their age demographic. The institutional leadership should ensure that it takes a proactive approach by regularly implementing health-promoting programs, such as stress-reducing workshops and counseling, as well as physical training programs.

This study's cross-sectional nature means that causal inferences can't be made, and the identified demographic predictors may not be the only contributors to the observed outcomes. Future research should consider employing longitudinal designs to monitor the development of workplace burden over time and incorporate organizational and environmental factors that may influence nurses' well-being. Additionally, qualitative approaches could provide a deeper understanding of ICU nurses lived experiences with physical and psychological stressors. It should also be acknowledged that the sample size was not formally calculated, which represents a limitation of the current study.

CONCLUSION

Approximately one-third of nurses working in ICUs experience physical burden, while nearly half report psychological stress. Age and education level emerged as moderate and strong predictors of physical and psychological burden, respectively, among ICU nursing staff in Al-Nasiriyah hospitals. These findings highlight the substantial challenges faced by ICU nurses, including burnout, emotional exhaustion, and physical strain. Addressing these issues requires a multifaceted approach involving both individual and organizational interventions. Prioritizing the well-being of ICU nurses is essential for building a resilient healthcare workforce and enhancing patient care quality. Future research should explore the complex relationship between workplace conditions, individual coping mechanisms, and overall health among ICU professionals to inform the development of effective, evidence-based support strategies.

ETHICAL DECLARATIONS

Acknowledgments

The authors extend their sincere gratitude to all the nursing staff at the selected hospitals for their cooperation and valuable participation in this study.

Ethics Approval and Consent to Participate

The study was conducted after obtaining written ethical approval (UTQN-IRB/234/2024) under protocol (UTQN-IRB) from the Institutional Review Board of the College of Nursing, Thi-Qar University, on September 12, 2024. Formal collaboration letters were secured from each participating hospital. Prior to data collection, informed consent was obtained from all nursing staff working in ICUs who agreed to participate in the study.

Consent for Publication

Not applicable.

Availability of Data and Material

The data generated and analyzed during the current study are available from the corresponding author upon reasonable request.

Competing Interests

The authors declare that there is no conflict of interest.

Funding

No funding.

Authors' Contributions

The first author was responsible for data collection and manuscript drafting. The second author performed data analysis and contributed to the discussion section. Both authors reviewed and approved the final version of the manuscript.

REFERENCES

[1] A. Kumar, A. Sinha, J. R. Varma, A. M. Prabhakaran, A. G. Phatak, and S. M. Nimbalkar. Burnout and its correlates among nursing staff of intensive care units at a tertiary care center. *Journal of Family Medicine and Primary Care*, 10(1):443–448, 2021.

[2] A. Abduelazeez and M. Tahir. Job satisfaction and related factors among intensive care nurses in governmental hospitals at khartoum state–sudan. *J Comm Pub Health Nurs*, 2(2):114, 2016.

[3] C. Quesada-Puga and *et al.* Job satisfaction and burnout syndrome among intensive-care unit nurses: A systematic review and meta-analysis. *Intensive and Critical Care Nursing*, 82:103660, 2024.

[4] A. Koinis, V. Giannou, V. Drantaki, S. Angelaina, E. Stratou, and M. Saridi. The impact of healthcare workers' job environment on their mental-emotional health. coping strategies: the case of a local general hospital. *Health Psychology Research*, 3(1):1984, 2015.

[5] S. Rathnayake, D. Dasanayake, S. D. Maithreepala, R. Ekanayake, and P. L. Basnayake. Nurses' perspectives of taking care of patients with coronavirus disease 2019: A phenomenological study. *PLOS One*, 16(9):e0257064,

http://doi.org/10.33091/amj.2025.159806.2228

2021.

[6] N. Turan and G. Ançel. Examination of the psychological changes in nurses due to workload in an intensive care unit: a mixed method study. *Contemporary Nurse*, 56(2):171–184, 2020.

[7] I. P. Adamopoulos and N. F. Syrou. Associations and correlations of job stress, job satisfaction and burnout in public health sector. *European Journal of Environment and Public Health*, 6(2):em0113, 2022.

[8] A. Lima and *et al.* The burnout of nurses in intensive care units and the impact of the sars-cov-2 pandemic: A scoping review. *Nursing Reports*, 13(1):230–242, 2023.

[9] L.-O. Lundqvist and A. Schröder. Evaluation of the scl-9s, a short version of the symptom checklist-90-r, on psychiatric patients in sweden by using rasch analysis. *Nordic Journal of Psychiatry*, 75(7):538–546, 2021.

[10] M. Välimäki and *et al.* Perceptions of patient aggression in psychiatric hospitals: a qualitative study using focus groups with nurses, patients, and informal caregivers. *BMC Psychiatry*, 22(1):344, 2022.

[11] A.-R. Babapour, N. Gahassab-Mozaffari, and A. Fathnezhad-Kazemi. Nurses' job stress and its impact on quality of life and caring behaviors: a cross-sectional study. *BMC Nursing*, 21(1):75, 2022.

[12] R. A. Hamed, S. Y. Abd Elaziz, and A. S. Ahmed. Prevalence and predictors of burnout syndrome, posttraumatic stress disorder, depression, and anxiety in nursing staff in various departments. *Middle East Current Psychiatry*, 27:1–8, 2020.

[13] M. Wareth and S. Eltaybani. Occupational stress and stressors experienced by the newly practicing nurses in intensive care units. *Journal of Nursing Education and Practice*, 9(3):7, 2019.

[14] M. K. Balai, R. D. Avasthi, V. Raghu, and A. Jonwal. Psychological impacts among health care personnel during covid-19 pandemic: a systematic review. *Journal of Caring Sciences*, 11(2):118, 2022.

[15] Z. Zanjani, S. Joekar, and A. Omidi. The mental health and job burnout of nurses during the covid-19 outbreak: Resilience as a mediator. *Iranian Journal of Psychiatry and Behavioral Sciences*, 15(2), 2021.

[16] S.-H. Shieh, F.-C. Sung, C.-H. Su, Y. Tsai, and V. C.-R. Hsieh. Increased low back pain risk in nurses with high workload for patient care: A questionnaire survey. *Taiwanese Journal of Obstetrics and Gynecology*, 55(4):525–529, 2016.

[17] A. S. Belay, M. M. Guangul, W. N. Asmare, and G. Mesafint. Prevalence and associated factors of psychological distress among nurses in public hospitals, southwest, ethiopia: A cross-sectional study. *Ethiopian Journal of Health Sciences*, 31(6), 2021.

[18] E. K. Alnazly and A. A. Hjazeen. Psychological distress and coping strategies among nurses during the covid-19 pandemic: A cross-sectional online survey. *The Open Nursing Journal*, 15(1), 2021.

[19] M. M. Van Mol, E. J. Kompanje, D. D. Benoit, J. Bakker, and M. D. Nijkamp. The prevalence of compassion fatigue and burnout among healthcare professionals in intensive care units: a systematic review. *PLOS One*, 10(8):e0136955, 2015.

[20] B. Irfan, O. Irfan, A. Ansari, W. Qidwai, and K. Nanji. Impact of caregiving on various aspects of the lives of caregivers. *Cureus*, 9(5), 2017.

[21] Z. Nabizadeh-Gharghozar, M. Adib-Hajbaghery, and S. Bolandianbafghi. Nurses' job burnout: a hybrid concept analysis. *Journal of Caring Sciences*, 9(3):154, 2020.

[22] R. Hanna, B. Jolanta, B. Katarzyna, Z. Kornelia, and J. Mariusz. The impact of patient death on the risk of developing occupational burnout in midwives: a preliminary cross-sectional study. *Scientific Reports*, 14(1):25634, 2024.

[23] J. Wilson and M. Kirshbaum. Effects of patient death on nursing staff: a literature review. *British Journal of Nursing*, 20(9):559–563, 2011.

[24] P. Van Bogaert and *et al.* Predictors of burnout, work engagement and nurse reported job outcomes and quality of care: a mixed method study. *BMC Nursing*, 16:1–14, 2017.

[25] P. Galanis, I. Vraka, D. Fragkou, A. Bilali, and D. Kaitelidou. Nurses' burnout and associated risk factors during the covid-19 pandemic: A systematic review and meta-analysis. *Journal of Advanced Nursing*, 77(8):3286–3302, 2021.

[26] M. K. Shah, N. Gandrakota, J. P. Cimiotti, N. Ghose, M. Moore, and M. K. Ali. Prevalence of and factors associated with nurse burnout in the us. *JAMA Network Open*, 4(2):e2036469, 2021.