Examining the Relationship between Bournout Level, Stress Level, Resilience Level, and Turnover Intention among Nurses in Northern Jordanian Hospitals

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Abstract: Burnout and stress pose significant challenges within the realm of human services on a global scale, particularly raising substantial concerns regarding the well-being and working conditions of nurses. Recently classified as an occupational phenomenon. Burnout and stress can jeopardize the quality of nursing care and patient safety. Consequently, this study aimed to evaluate the levels of burnout, stress, and resilience among nurses, while also exploring their correlation with turnover intentions. A cross-sectional study was conducted by enlisted 372 nurses employed across five public hospitals in northern Jordan. Validated tools were utilized to measure the variables of interest. The findings revealed that nurses experienced a moderate level of burnout and stress, but demonstrated a high level of resilience. Importantly, the study established a significant relationship between levels of burnout, stress, resilience, and turnover intentions. This research holds practical implications for the development and improvement of policies aimed at substantially reducing turnover intentions, thereby ensuring the provision of high-quality healthcare services in Jordan. Policymakers are encouraged to implement effective strategies targeting the reduction of burnout and stress, while simultaneously promoting resilience among nurses. Further exploration of the connections between psychosocial risks and health emergencies could prove valuable in safeguarding the well-being of not only nurses but also other healthcare professionals.

Keywords: Burnout, Challenges, Well-being, Turnover intentions, Resilience.

1. INTRODUCTION

Burnout manifests as a syndrome with three distinctive dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment, as identified by Lee et al. (2021). Individuals grappling with burnout often exhibit a higher propensity to quit their jobs, sometimes doing so promptly. Even if they opt to remain in their positions, their job performance, efficacy, and job satisfaction experience significant declines. Additionally, the repercussions of burnout extend to physical symptoms such as pain and have adverse effects on mental health, contributing to conditions like depression and anxiety, as noted by Galanis et al. (2023) and Søvold et al. (2021). Notably, the 11th Revision of the International Classification of Diseases (ICD-11), as highlighted by Khammissa et al. (2022), recently classified burnout as an occupational phenomenon. This classification underscores burnout's emergence as a global health issue in workplaces.

Burnout is a complex psychological syndrome, arising from interpersonal stressors within the workplace, characterized by overwhelming exhaustion, cynicism, and a diminished sense of efficacy, (Mudallal et al., 2017). Research consistently points to nurses as a group prone to experiencing burnout, (Higgins et al., 2020; Wolotira, 2023). Various factors have been identified as predictors of burnout among nurses, encompassing demographic characteristics such as age, education, religion, and marital status; work-related elements including workplace satisfaction, experience, and the work environment; personal aspects like personality characteristics; and additional factors such as compassion satisfaction and compassion fatigue, (Konstantinou et al., 2018; Van Bogaert et al., 2013; Andela et al.; 2015). Based on prior research, demographic and work-related attributes, including age as indicated by Beier et al. (2023), gender as highlighted by Zhang et al. (2022), marital status, religion, education, and job position as discussed by Harris & Tao (2022) and Jin et al. (2023), have been identified as factors influencing burnout and stress levels. The escalation of burnout and high stress levels among nurses has been linked to an increase in turnover intention, (Al kharishi et al., 2023). Furthermore, these conditions have the potential to compromise the quality of nursing care and jeopardize patient safety.

The findings from the research indicate a robust positive correlation between stress and burnout, aligning with earlier studies (Gandi et al., 2011). Notably, work-related stress emerges as a significant concern, with burnout symptoms being closely linked to stress stemming from job demands and a lack of organizational support, (Khamisa et al., 2017; Şanlıtürk 2021). Conflicts arising from the interplay between the patient's situation, institutional systems/support, and the professional obligations of nurses frequently lead to heightened overtime work and an increased risk of burnout, (Ashipala & Nghole 2021; Fang 2017). In contrast, Dall'Ora et al. (2020) found that personal stress, as opposed to work-related stress, served as a more effective predictor of burnout and general health. Notably, when nurses faced challenges within their families, their ability to concentrate on

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work diminished, contributing to an elevated risk of burnout (Fang, 2017).

Nurses' satisfaction, intention to stay, and job performance play pivotal roles in ensuring the delivery of health services in an effective, efficient, and sustainable manner (Banibaker et al. ,2019; Ebrahim ,2017). In addition to these factors, resilience emerges as a crucial attribute, denoting the capacity to endure various challenges such as trauma, health issues, work-related difficulties, and financial problems. Resilience enables individuals to effectively cope with and navigate through these adversities (Özdemir et al. ,2021). Resilience is acknowledged as a positive emotion that empowers employees to effectively navigate and cope with the challenges encountered in the workplace (Cooke et al. ,2019). Particularly in the healthcare sector, resilience assumes a crucial role in aiding personnel to adapt to crises and manage them effectively. It acts as a protective shield, helping mitigate the impact of stress and depression, (Yörük et al. ;2020). A study conducted in the United Kingdom during the pandemic revealed a noteworthy finding that only 32.7% of the nurses exhibited above-average levels of psychological resilience (Roberts et al. ;2021). This is significant considering that high psychological resilience in nurses is associated with various positive outcomes, including increased general well-being, robust psychological health, improved work relationships, enhanced quality of professional life, and heightened job satisfaction, (Soylu et al. ,2023). Moreover, resilience exerts a positive influence on nurses' self-confidence and autonomy levels, enhances their professional skills, elevates job and life satisfaction, mitigates mental health issues such as burnout and depression, and serves as a deterrent against leaving their positions (Çam et al. ,2017). Therefore, the primary objective of this study is to scrutinize the levels of burnout, stress, and resilience among nurses working in northern Jordanian hospitals and their impact on turnover intention. By doing so, the research aims to establish foundational data that can inform the development of prevention and intervention strategies specifically addressing burnout, stress levels, and turnover intentions among nurses in northern Jordanian public hospitals.

2. Objective of the Study

The study is guided by the following research objectives:

1- To evaluate the extent of burnout among nurses employed in the northern regions of Jordanian public hospitals.
2- To gauge the level of stress experienced by nurses working in the northern part of Jordanian public hospitals.
3- To assess the degree of resilience among nurses in the northern sectors of Jordanian public hospitals.
4- To scrutinize the influence of burnout level, stress level, and resilience level on turnover intention among nurses working in northern Jordanian hospitals.

3. Method

3.1 Design

The research utilizes a quantitative, non-experimental, cross-sectional correlation design.

3.2 Participant

This study was conducted in Jordan spanning from October 2023 to December 2023. The northern region of Jordan, encompassing a total of 13 public hospitals and a workforce of around 3000 nurses,

served as the study area. Utilizing a sample size calculator with a confidence level of 95%, a margin of error of 5%, and a population proportion of 50% (Calculator.net, 2022), the determined minimum sample size was 341.To ensure diversity, the investigator employed a random selection process, choosing five hospitals from the list of 13 in the study area. The nursing directors provided the list of nurses employed in these hospitals, from which the researcher randomly selected participants. The combined list of nurses served as the sampling pool, and individuals were chosen through a straightforward random sampling method. Each nurse was assigned a number for anonymity. To account for potential non-respondents or missing data, the researcher distributed 500 questionnaires, ultimately receiving 374 responses. After excluding two incomplete questionnaires during data analysis, the response rate for this study was determined to be 75%.

3.3 Instrument

The tool employed in this study incorporates three scales.

1- Demographics data:

The instrument incorporates demographic variables, encompassing information on age, gender, marital status, education level, years of experience in nursing, current job title, and the hospital of employment.

2- Burnout Assessment Tool:

The Copenhagen Burnout Inventory was employed in this study to evaluate burnout among nurses. This inventory comprises three subscales: personal (six items), work burnout (seven items), and client burnout (six items). Respondents provide answers using a five-point Likert scale for twelve items, indicating frequency ('5 - always', '4 - often', '3 - sometimes', '2 - seldom', and '1 - never/almost never'). For seven items, response categories are based on intensity, ranging from 'a very low degree' to 'to a very high degree'. The scoring system categorizes burnout levels as follows: scores of 25-49 are considered 'mild', 50 to 74 are labelled 'moderate', >= 75 are classified as 'high'. All items are straightforward, positively skewed, relevant to their respective subscales, and exhibit high internal reliability, as validated by Kristensen et al. (2005) and Creedy et al. (2017).

3- Nursing stress scale

The Brief Nursing Stress Scale draws upon the stress dimensions identified in the Nursing Stress Scale (NSS) proposed by Gray-Toft and Anderson in 1981. These dimensions encompass stressful situations arising from the process of dying or death, conflicts with doctors, lack of support, conflicts among nurses, workload, and uncertainty of treatment. Originally developed based on Lazarus's psychological model of stress (1966), this scale is widely recognized and frequently utilized for assessing stressors in nursing, noted as one of the most popular instruments in this regard (French & Eyles, 1999). Respondents rate sentences based on their agreement using a Likert-type, 4-point scale, ranging from 1 (never) to 4 (almost always). The total score ranges from 9 to 36, scores between 9 and 17 signifying a 'mild' level of stress, scores between 18 and 26 denoting an 'average' level of stress, and scores between 26 and 36 representing a 'high' level of stress

4- Nursing resilient

The Davidson Resilience Scale (CDRISC-10) comprises 10 statements that describe various aspects of resilience, including flexibility, self-efficacy, emotion regulation, optimism, and

cognitive focus/maintaining attention under stress. Each statement is rated on a 5-item Likert scale, ranging from 0 ("not true") to 4 ("true nearly all the time"). The total score can range from 0 to 40, with higher scores indicating greater resilience. Respondents are asked to reflect on their experiences over the previous 30 days and indicate to what extent these statements are true for them. This scale, validated as a reliable tool for assessing nursing resilience in healthcare settings (Yan et al., 2023). Researcher suggests that a total score below 25.5 should be considered a low resilient level, while a score above 25.5 indicates a high resilient level (Mealer et al.; 2016).

5- Turnover intention

The Turnover Intention Scale (TIS-6) in this study is assessed using a six-item scale. Participants respond on a scale ranging from 1=Never to 5=Always and 1=Highly unlikely to 5=Highly likely. The item mean scale spans from 1=To a very large extent to 5=To no extent. Higher scores on the TIS-6 signify a greater inclination towards turnover intention among participants. It's noteworthy that the TIS-6 has demonstrated reliability and validity in previous research, being established as an effective scale for measuring turnover intention and predicting actual turnover among nurses (Bothma & Roodt, 2013).

3.4 Reliability and Validity

Factor analysis, employing the principal component extraction method along with varimax rotation and Kaiser Normalization, was utilized to evaluate the scales of burnout, nursing stress, resilience, and Turnover Intention. The outcomes indicate that the items used in measuring these scales satisfied the conditions required for factor analysis. The Cronbach's reliability coefficients for the studied variables ranged between 0.76 and 0.85, attesting to the internal consistency and reliability of the scales.

4. Data Collection and Ethical Issues

The study was initiated following the receipt of ethical approval from the Jordan Ministry of Health. Stringent measures were implemented to ensure the utmost protection of participants, including safeguards against harm, deception, coercion, and breaches of confidentiality. Anonymity was rigorously maintained by withholding participants' names and any identifiable features. Prior to participation, informed written consent was obtained from all participants after a comprehensive explanation of the study, providing them with the opportunity to seek clarification and ask questions. Participants were explicitly informed of their right to withdraw from the study at any stage. Nurses were invited to

participate voluntarily through an enrolment letter accompanying the questionnaire. This letter clearly outlined the research objectives and emphasized the participants' right to decline participation. The questionnaire, administered by the researcher, took approximately 20-30 minutes to complete. To further ensure confidentiality, participants deposited their completed questionnaires in a sealed envelope in the designated box after completion.

5. Data Analysis

Descriptive statistics were calculated to outline demographic features among the research contributors, with 372 response analysed, no missing data were found, demonstrating a 0% level for all measures. To gauge non-response bias, characteristics of early and late nurses were related, as mentioned by Hair et al. (2006) for evaluating nonresponse bias in quantitative studies. The exploration showed no significant changes (p>0.05) through all measures between early and late respondent, signifying the study results can be widespread to the population. Skewness and kurtosis tests were engaged to gauge statistics normality, the findings representing a normal distribution as skewness standards floor between -2 to +2, and kurtosis standards were between -7 to +7. The significance level for this study is set at (p<0.05).

5.1 Personal Characteristics

In our study, we examined a sample of 372 participants, focusing on various demographic characteristics. The gender distribution revealed that 180 participants identified as male, constituting 48.4% of the sample, while 192 participants identified as female, making up the remaining 51.6%. Concerning marital status, the majority of participants were single, accounting for 56.5% of the sample. Married participants constituted 40.3% and a smaller portion, 3.2%, identified as widowed and 0 divorced nurses. Education levels varied among the participants. A notable portion, 21.5%, held a diploma, while the majority, 75.3%, possessed a bachelor's degree. A smaller percentage, 3.2%, had attained a master's degree. Regarding current job titles, the sample included 80 participants working as Assistance Nurses (21.5%), as Staff Nurses (69.6%), as Team Leader Nurses (5.4%), as Head Nurses and Deputy Head Nurses (1.6%), and Nursing Supervisors (1.9%). No participants fell into the "Others" category. Finally, participants were distributed across various hospitals. Princess Basma Hospital had the highest representation, with 31%, followed by Princess Rahma Hospital at 28.2%. Al-Eman Hospital had 16.1%, Jaresh Governmental Hospital 13.4%, and Al-Mafraq Government Hospital 11.3%.

Sample characteristics (N=372)

Sample characteristics	Number	Percentage
Gender		
Male	180	48.4%
Female	192	51.6%
Marital status		
Single	210	56.5%
Married	150	40.3%
Widowed	12	3.2%
Education level		

Diploma	80	21.5%
Bachelors	280	75.3%
Masters	12	3.2%
Current job title		
Assistance nurse	80	21.5%
Staff nurse	259	69.6%
Team leader nurse	20	5.4%
Head nurse and deputy head nurse	6	1.6%
Nursing supervisor	7	1.9%
Others	0	0
Hospital of working		
princess Basma hospital	115	31%
Princess Rahma hospital	105	28.2%
Al-Eman Hospital	60	16.1%
Jaresh governmental hospital	50	13.4%
Al-Mafraq Government Hospital	42	11.3%

5.2 Level of Burnout, Stress and Resilient Among Nurses

The descriptive statistics for the level of burnout are presented as percentages, categorizing scores as follows: 0 to 24 = 'low'; 25 to 49 = 'mild'; 50 to 74 = 'moderate'; and above >= 75 'high' level of burnout. The results reveal that the majority of nurses (n=251) scored between 50-74, signifying a moderate level of burnout. The computed mean score for the burnout scale is 69, indicating a moderate level of burnout among nurses. The stress level is categorized with cut-off points from the nursing stress scale: mild stress level (9-17), moderate stress level (18-29), and above 26 considered a high level of stress. ©most of the nurses (n=248) have moderate level of stress. The mean total score for the nursing stress scale is 25.7, denoting a moderate level of stress among nurses. Resilient levels are categorized with a cut-off point: nurses scoring less than 25.5 have a low level of resilience, and those scoring above that threshold are considered to have a high level of resilience. The data analysis shows that 56.6% of nurses have a high level of resilience, with a mean score of 27.4 indicating the presence of a high level of resilience among study participants.

The descriptive statistics of level of burnout, stress level, and resilient level (n=372).

Categories	Number	Percentage
Burnout		
Low level scores > 25	10	2.7%
Mild level scores (25-49)	23	6.2%
Moderate level (50-74)	251	67.5%
High level > 75	88	23.6%
Stress level		
Mild level of stress score (9- 17)	32	8.6%
Moderate level of stress (18-26)	248	66.7%
High level of stress >26	92	24.7%
Resilient level		
Low resilient score < 25.5	162	43.5%
High resilient score >= 55	210	56.6%

5.3 Correlation Between Burnout Level, Stress Level, Resilient Level and Turnover Intension

Pearson correlation was calculated to explore the correlation of independent variables with turnover intention. The results reveal a strong positive correlation between burnout and turnover intention ($r = 0.81$), as well as a strong positive correlation between stress level and turnover intention ($r = 0.74$). Furthermore, there is a moderate negative correlation between the resilient scale and turnover intention ($r = -0.54$), as depicted in the table below. This indicates that as burnout and stress levels increase, turnover intention tends to increase, while a higher level of resilience is associated with a decrease in turnover intention.

Person correlation coefficients for burnout, stress, and resilient level

Categories	Person correlation	Sig. (2-tailed)	Strength of relationship
Burnout	0.81	<0.05	Strong
Nurses stress	0.75	<0.05	Strong
Resilient	-0.54	<0.05	Moderate

6. Discussion

The current study reveals that a significant proportion of the sampled population experiences a moderate level of burnout, constituting 67.5%, while 23.6% exhibit a high level of burnout. These findings align with a study conducted on physicians and nursing staff in an emergency hospital, where the majority (66%) demonstrated a moderate level of burnout, and 24.9% exhibited a high level of burnout (Queiros et al., 2013). Similarly, another study observed that nurses often experience burnout at a moderate level (Abdo & El-Sallamy, 2016). Contrasting results are also reported in the literature, with some studies indicating high levels of burnout among nurses (Yuan et al., 2020; Zhang et al., 2014). Furthermore, our study reveals that nurses experience moderate and high levels of stress, which is consistent with findings from other studies conducted in Australia and Jordan. These studies highlight a similarity in identifying workload as the primary source of stress, while the lowest source of stress is attributed to a lack of staff support (Andal, 2006; Banibaker et al., 2019). These findings align with a previous study that identified a high level of stress among nurses, attributing it to the impact of critical nursing shortages and the advancing age of the current nursing workforce (Kumar et al., 2016). The high stress levels among nurses in the present study may be attributed to the challenging working conditions, including exposure to death and dying events, as well as the reported lack of resources in Jordanian public hospitals.

Our study results indicate a high level of resilience among nurses, and this finding is supported by other studies that also reported moderate levels of resilience among nurses, particularly during the COVID-19 pandemic (Jose et al., 2020; Afshari et al., 2021). In a study conducted in the UK by Roberts et al. (2021), nurses' resilience scores were found to be moderate during the COVID-19 pandemic. Similarly, Luceño-Moreno et al. (2020) in Spain reported moderate levels of resilience among healthcare providers. The literature suggests that resilience is effective in maintaining mental health and preventing the impact of stressful events (Setiawati et al., 2021). The findings of the study unveiled a partially positive and strong correlation between burnout, stress level, and turnover intention. This suggests that turnover intention decreases as burnout and stress decrease among Jordanian nurses. These results align with similar investigations reported earlier, as seen in studies such as that by Wang et al. (2020). Consistent with prior research, our results underscore the notion that an overall increase in the levels of burnout and stress is associated with a higher rate of turnover intention and a lower percentage of job satisfaction (Yanchus et al., 2017). The results of our study reveal a

significant relationship between resilience and turnover intention, aligning with prior research on nurses that also indicated a significant association between resilience and turnover intention (AbuRuz, 2014). This finding is consistent with results from studies conducted by Shahrbabaki et al. (2023) and Ghandi et al. (2017), which illustrated that resilience had a significant effect on turnover intention. The premise is that individuals with higher resilience are better equipped to cope with work-related stress and tend to experience higher job satisfaction, ultimately leading to lower turnover intention among employees. The variance of level resilient and their impact in nurses turn over intention might be attributed to different social and economic culture among different study participants.

7. Conclusion

The study uncovered that nurses experience a moderate level of burnout and stress, while exhibiting a high level of resilience. Strong correlations were identified between burnout, stress levels, and turnover intention, with a negative correlation observed between nurses' resilience and their intention to turnover. The findings highlight the importance of resilience, as a higher level of resilience positively impacts patient care and contributes to improved retention, especially in emergency situations. The study emphasizes the need for interventions aimed at enhancing nurses' resilience and well-being to effectively manage the demands of work and life. Future research endeavors should prioritize interventions geared towards improving nurses' resilience while concurrently reducing levels of stress and burnout.

8. Limitation

The study acknowledges certain limitations, including a small sample size, which might impact the generalizability of the results. Studies with larger sample sizes may provide different insights. Additionally, the use of self-report questionnaires introduces the potential for response biases. Future research could explore other public hospitals, considering variations in structure, culture, and organizational climate. The cross-sectional study design employed in this research poses challenges in establishing causal relationships between risk factors and turnover intention. The findings may not be fully representative of the entire nursing population in Jordan, warranting caution in generalizing the results. Subsequent research efforts could involve assessing turnover intention and levels of burnout and stress at different time points to enhance the understanding of these dynamics.

Abbreviations

CDRISC-10: The Davidson Resilience Scale 10
TIS-6: The Turnover Intention Scale 6.

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