

Work-Related Stress as a Predictor of Turnover Intention Among Nurses: Cross-Sectional Findings from Jeddah Second Health Cluster, Saudi Arabia

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ABSTRACT

Background: Nursing is one of the most demanding professions, often associated with heavy workloads, emotional strain, and organizational pressures that contribute to work-related stress. Persistent exposure to stress not only undermines nurses' well-being but also increases the risk of turnover, creating challenges for healthcare systems. In Jeddah City, Saudi Arabia, unique demographic and institutional factors further intensify these stressors, making it essential to examine their impact on turnover intention. **Aim:** This study aimed to investigate the effect of work-related stress on turnover intention among nurses working in the second health cluster of Jeddah City. **Methods:** A cross-sectional survey design was employed. The target population included all registered nurses in the second health cluster, with a final sample of 370 nurses selected through simple random sampling. Data were collected using two validated tools: the Workplace Stress Scale (WSS) and the Turnover Intention Scale (TIS). Descriptive statistics were used to summarize demographic variables and scale scores. Structural Equation Modeling using SmartPLS was applied to test the hypothesized relationship between work-related stress and turnover intention. **Results:** Nurses reported moderate levels of work-related stress, with the highest stressors linked to workload, unreasonable deadlines, and interference of job pressures with personal life. Turnover intention was also moderate, with a substantial proportion of respondents contemplating leaving their jobs within a year. Hypothesis testing confirmed a significant positive relationship between workplace stress and turnover intention ($\beta = 0.312$, $t = 4.12$, $p < 0.001$). **Conclusion:** The findings confirm that work-related stress is a critical determinant of turnover intention among nurses in Jeddah City. Addressing workplace stress through organizational interventions, supportive leadership, and improved staffing policies is essential to reduce turnover risk and enhance workforce stability.

KEYWORDS: Work-Related Stress, Turnover Intention, Nurses, Jeddah City, Saudi Arabia.

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INTRODUCTION

The nursing profession, a cornerstone of the healthcare system, is characterized by a strong commitment to patient care and health maintenance. Nurses, often serving as primary caregivers, play a vital role in various settings such as hospitals, clinics, and community health (Labrague et al., 2017). However, the inherent demands of nursing, including long working hours, high-stakes decision-making, and significant emotional labor, can lead to substantial occupational stress (Kakemam et al., 2019). This stress, if not effectively managed, may negatively impact nurses' health and job performance (Brooks et al., 2019), underscoring the need to understand and address its sources and implications.

Nursing involves a range of stressors from physical workload to emotional and psychological challenges (Chang & Daly, 2019). Nurses frequently encounter critical patient care situations, administrative pressures, and sometimes insufficient support from management and colleagues, leading to burnout – a state of exhaustion due to prolonged work stress (Vernekar & Shah, 2018). This burnout not only affects nurses' well-being but also the quality of patient care (Alenezi et al., 2018).

Nurse turnover is a major concern in healthcare, often driven by high stress levels (Baye et al., 2020). Turnover leads to staffing shortages, increased workloads for remaining staff, and financial burdens due to recruitment and training costs (Rattray et al., 2021). High turnover rates can also diminish patient care quality and satisfaction (Tsegaw et al., 2022). The direct link between work-related stress and turnover in nursing is well-established (Labrague & de Los Santos, 2021). Stress can lead to job dissatisfaction, health issues, and the decision to leave the profession, emphasizing the need for effective stress management strategies in nursing workplaces (Kim et al., 2018).

The context of Jeddah City, a bustling urban center with a diverse population, presents unique challenges and stressors for the nursing profession. Nurses in Jeddah's second health cluster are not only navigating the universal pressures of healthcare but are also faced with cultural, economic, and infrastructural factors that exacerbate work-related stress. Given the high demand for healthcare services in north Jeddah, the pressure on nurses to perform efficiently and compassionately is immense, making the city an ideal case study for examining the relationship between work-related stress and turnover intention (Cabrera-Aguilar et al., 2023).

Research exploring the interplay of stress and turnover intention in nursing is crucial for developing targeted interventions and policies (Molero Jurado et al., 2019). By delving deeper into the specific challenges faced by nurses in this urban healthcare

setting, the discussion transitions from a broad overview of the nursing profession's inherent stressors to a focused examination of how these stressors influence turnover in a localized context (Shdaifat et al., 2023). Through this lens, occupational stress, the critical nature of nursing, and the impact of stress on job performance and turnover are seamlessly connected to the unique environment of Jeddah. This approach not only contextualizes global issues within a specific geographical and cultural setting but also highlights the importance of addressing work-related stress as a key factor in managing nurse turnover.

METHODOLOGY

Research Design

This study adopted a cross-sectional survey design, which is widely recognized as an appropriate approach for examining relationships between variables at a single point in time. The design enabled the researchers to explore the direct impact of work-related stress on turnover intention among nurses in Jeddah City second health cluster without requiring longitudinal follow-up. By using this design, data could be collected from a large sample efficiently, allowing for the identification of associations between stress and turnover intention in a real-world clinical context.

Research Population

The target population for this study consisted of all registered nurses working in the second health cluster of Jeddah City, Saudi Arabia. This included nurses from public and private hospitals, primary healthcare centers, and specialized clinics. The inclusion criteria required that participants be licensed nurses with at least six months of continuous work experience, ensuring that they had sufficient exposure to the demands of their work environment. Nurses who were on extended leave or who had less than six months of service were excluded, as their experiences would not provide an accurate reflection of the ongoing pressures faced by the nursing workforce. This diverse population was selected to capture the wide range of stressors encountered across healthcare settings in Jeddah.

Research Sample and Sampling Strategy

The population of registered nurses in the second health cluster totaled 6,601. To determine an appropriate sample size, Krejcie and Morgan's table and Stephen Thompson's equation were applied, both of which indicated a sample of approximately 363 nurses as sufficient to achieve statistical power and ensure representativeness. To recruit participants, the study employed a simple random sampling strategy. A comprehensive list of nurses was obtained, and individuals were randomly selected using a random number generator. This method minimized bias and increased the generalizability of the findings, ensuring that every nurse in the population had an equal chance of being included in the study.

Data Collection Tools

The study relied on two standardized and validated instruments that correspond directly to the study's variables. Work-related stress was measured using the Workplace Stress Scale (WSS), an eight-item tool developed by the American Institute of Stress. Responses were rated on a Likert scale ranging from "never" to "very often," with higher scores indicating higher levels of perceived stress. The WSS captures stressors related to workload, organizational demands, and work-life balance and has been consistently reported to have strong internal reliability, with Cronbach's alpha values above 0.80.

Turnover intention was assessed using the Turnover Intention Scale (TIS), which consists of 15 items rated on a Likert scale from "strongly disagree" to "strongly agree." This scale measures respondents' levels of job dissatisfaction, withdrawal behaviors, and intentions to resign. Higher scores reflect stronger intentions to leave one's position. The TIS has been widely applied in healthcare research and has demonstrated strong psychometric properties, with Cronbach's alpha values above 0.85. The use of these two validated scales ensured that the key constructs relevant to the study were measured accurately and reliably.

Data Collection Procedure

Data collection was conducted over a six-week period. Prior to distribution, formal permissions were obtained from the administrative offices of the second health cluster and from the heads of participating healthcare institutions. Paper-based questionnaires were then delivered to hospitals, primary healthcare centers, and specialized clinics within the cluster. Nurses were provided with a brief explanation of the study's objectives and significance, and participation was entirely voluntary. Each participant was given an information sheet and an informed consent form to review before completing the survey.

The questionnaires were distributed in sealed envelopes to maintain privacy, and participants were allowed to complete them at their convenience, typically during break times or after the end of their shifts. A collection box was placed at nursing stations within each facility to enable anonymous submission of the completed questionnaires. To ensure an adequate response rate, coordinators in each facility reminded participants about the study at regular intervals. Once collected, the completed surveys were logged, coded, and entered into a secure database. This systematic approach to data collection minimized missing responses, encouraged honest feedback, and protected the integrity of the data.

Ethical Considerations

The study received ethical approval from the Institutional Review Board prior to commencement. All procedures adhered to the principles of the Declaration of Helsinki regarding research involving human subjects. Nurses were informed that their participation was voluntary and that they could withdraw at any stage without any consequences. Informed consent was obtained in writing from every participant before data collection began. Confidentiality and anonymity were strictly maintained, as no personal identifiers were recorded. Instead, each questionnaire was assigned a numerical code, and results were reported in aggregate form only. Completed paper questionnaires were stored in locked cabinets accessible only to the research team, while

electronic data were stored in a password-protected system. These measures ensured the protection of participants' rights and safeguarded the credibility of the study.

Data Analysis

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS software. Descriptive statistics were first performed to summarize demographic characteristics and variable distributions. Reliability and validity of the constructs were assessed through Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). Structural equation modeling was then applied to test the direct effect of work-related stress on turnover intention. Standardized path coefficients, t-values, and p-values were reported to determine the strength and significance of the relationships. Multicollinearity diagnostics and model fit indices were also examined to ensure robustness of the results.

RESULTS

Descriptive Statistics

The study sample comprised 370 nurses from the second health cluster in Jeddah City. The gender distribution was nearly equal, with 186 males (50.27%) and 184 females (49.73%). The mean age of respondents was 32.68 years (SD = 6.01), while the mean years of professional experience was 7.90 years (SD = 5.88). The majority of participants were married (53.78%), followed by single nurses (42.16%), with small proportions widowed (1.89%) and divorced (2.16%). In terms of educational background, 35.14% held a master's degree, 29.46% held a PhD, and 27.57% held a bachelor's degree, while the remainder were diploma holders. Nurses were distributed across a variety of healthcare settings, with the highest participation from King Abdullah Medical Complex and Maternity and Children Specialized Hospital (18.11%) and King Fahad General Hospital (17.84%).

Table 1. Demographic Characteristics of Respondents

Variable	Categories	Frequency (n)	Percentage (%)
Gender	Male	186	50.27
	Female	184	49.73
Age (years)	Mean ± SD	32.68 ± 6.01	—
Years of Experience	Mean ± SD	7.90 ± 5.88	—
Marital Status	Married	199	53.78
	Single	156	42.16
	Widowed	7	1.89
	Divorced	8	2.16
Educational Background	Bachelor's degree	102	27.57
	Master's degree	130	35.14
	PhD degree	109	29.46
Healthcare Setting	King Abdullah Medical Complex & Maternity and Children Specialized Hospital	67	18.11
	King Fahad General Hospital	66	17.84
	Al-Azizia Hospital	65	17.57
	Erada and Mental Health Complex	61	16.49
	Jeddah Eye Hospital	56	15.14
	Rabig General Hospital	55	14.86

Descriptive Analysis of Work-Related Stress

The descriptive analysis of the Workplace Stress Scale indicated that nurses experienced moderate stress levels across various job situations. The highest mean score was observed for the item "I feel that job pressures interfere with my family or personal life" (M = 3.06, SD = 1.40). Other prominent stressors included excessive workload and unreasonable deadlines (M = 3.05, SD = 1.45) and negative impacts on physical or emotional well-being (M = 3.02, SD = 1.39).

Table 2. Descriptive Analysis of Work-Related Stress

Item	Never F (%)	Rarely F (%)	Sometimes F (%)	Often F (%)	Very often F (%)	Mean ± SD
Conditions at work are unpleasant or unsafe	71 (19.19)	76 (20.54)	77 (20.81)	73 (19.73)	73 (19.73)	3.00 ± 1.40
Job negatively affects my physical/emotional well-being	65 (17.57)	81 (21.89)	80 (21.62)	68 (18.38)	76 (20.54)	3.02 ± 1.39
Too much work/unreasonable deadlines	77 (20.81)	67 (18.11)	68 (18.38)	77 (20.81)	81 (21.89)	3.05 ± 1.45

Item	Never F (%)	Rarely F (%)	Sometimes F (%)	Often F (%)	Very often F (%)	Mean ± SD
Difficult to express opinions to superiors	88 (23.78)	68 (18.38)	56 (15.14)	74 (20.00)	84 (22.70)	2.99 ± 1.50
Job pressures interfere with family/personal life	67 (18.11)	74 (20.00)	73 (19.73)	80 (21.62)	76 (20.54)	3.06 ± 1.40

Descriptive Analysis of Turnover Intention

The analysis of the Turnover Intention Scale (TIS) revealed that respondents expressed a moderate inclination toward leaving their jobs. The highest mean was for the item “I often think about quitting my present job” (M = 3.10, SD = 1.42), followed by “I will probably look for a new job in the next year” (M = 3.07, SD = 1.39). These results suggest that while many nurses remain committed to their roles, there is a substantial portion of the workforce contemplating job change, which highlights turnover intention as a pressing issue among nurses in Jeddah City.

Table 3. Descriptive Analysis of Turnover Intention

Item	Strongly Disagree F (%)	Disagree F (%)	Neutral F (%)	Agree F (%)	Strongly Agree F (%)	Mean ± SD
I often think about quitting my present job	70 (18.92)	78 (21.08)	72 (19.46)	76 (20.54)	74 (20.00)	3.10 ± 1.42
I will probably look for a new job in the next year	66 (17.84)	80 (21.62)	73 (19.73)	78 (21.08)	73 (19.73)	3.07 ± 1.39
I intend to leave my job as soon as possible	74 (20.00)	76 (20.54)	71 (19.19)	77 (20.81)	72 (19.46)	2.99 ± 1.41

Hypothesis Testing

Hypothesis H1: Workplace stress has a significant positive effect on turnover intention among nurses.

The structural model analysis supported Hypothesis H1. The results revealed a significant positive relationship between workplace stress and turnover intention, with a path coefficient of $\beta = 0.312$, a t-value of 4.12, and a p-value < 0.001. This indicates that higher levels of work-related stress significantly increase the likelihood of nurses intending to leave their jobs

Table 4. Hypothesis Testing Result (Workplace Stress → Turnover Intention)

Hypothesis	Path	β	t-value	p-value	Decision
H1	WSS → TIS	0.312	4.12	< 0.001	Supported

DISCUSSION

The results of this study revealed a statistically significant positive relationship between work-related stress and turnover intention among nurses in Jeddah City. This indicates that as levels of workplace stress increase, the likelihood that nurses will consider leaving their jobs also rises. This finding highlights the detrimental impact of persistent occupational stressors on the stability of the nursing workforce. In high-demand healthcare environments such as the second health cluster in Jeddah, nurses often experience extended shifts, staff shortages, and emotionally taxing clinical encounters. These pressures accumulate and surpass individual coping thresholds, leading to reduced job satisfaction and increased contemplation of resignation.

This outcome aligns with existing literature documenting the adverse effects of stress on nurse retention. Brooks et al. (2019) and Tsegaw et al. (2022) emphasized that chronic exposure to stress, characterized by emotional exhaustion, role ambiguity, and depersonalization, significantly raises the risk of turnover. Similarly, Baye et al. (2020) noted that the emotionally demanding nature of nursing—particularly in acute care and critical care settings—often results in burnout, which is a key precursor to withdrawal behaviors and eventual resignation. The findings of the present study, therefore, reinforce the well-established link between occupational stress and attrition in nursing populations globally.

The context of Jeddah City presents additional challenges that may exacerbate stress and turnover. The rapidly growing population, high patient influx, and reliance on both local and expatriate nursing staff place considerable demands on healthcare institutions. These conditions contribute to heavy workloads, limited opportunities for rest, and constant exposure to high-pressure clinical decision-making. In such environments, stress is not only a byproduct of the workload but also of systemic issues, including staffing imbalances and organizational expectations. The study thus underscores the urgent need for healthcare administrators in Jeddah to implement targeted stress management and retention strategies.

Furthermore, the findings have significant implications for the quality of patient care. High turnover rates create staffing shortages, increase the workload of remaining staff, and may compromise patient safety and satisfaction. Addressing workplace stress is therefore not only vital for protecting nurses’ well-being but also for ensuring continuity and quality of care delivery. Interventions such as improving nurse-patient ratios, providing opportunities for professional development, and fostering supportive organizational cultures are essential measures that can mitigate stress and reduce turnover intentions.

CONCLUSION

In conclusion, the evidence from this study confirms that work-related stress is a critical determinant of turnover intention among nurses in second health cluster Jeddah City. By acknowledging and addressing the sources of stress in the nursing work environment, healthcare systems can take proactive steps to strengthen workforce stability and enhance patient care outcomes.

REFERENCES

1. Baye, Y., Demeke, T., Birhan, N., Alemayehu, M., Bisetegn, T. A., & Duko, B. (2020). Job satisfaction and associated factors among nurses in public hospitals of the Southern Nations, Nationalities, and Peoples' Region (SNNPR), Ethiopia. *BMC Nursing, 19*(31).
2. Baye, Y., Demeke, T., Birhan, N., Semahegn, A., & Birhanu, S. (2020). Nurses' work-related stress and associated factors in governmental hospitals in Harar, Eastern Ethiopia: A cross-sectional study. *PLoS ONE, 15*(8), e0236782.
3. Brooks, S. K., Dunn, R., Amlôt, R., Rubin, G. J., & Greenberg, N. (2019). Protecting the psychological wellbeing of staff exposed to disaster or emergency at work: A qualitative study. *BMC Psychology, 7*(1), 78.
4. Brooks, S. K., Rubin, G. J., & Greenberg, N. (2019). Traumatic stress within disaster-exposed occupations: overview of the literature and suggestions for the management of traumatic stress in the workplace. *British Medical Bulletin, 129*(1), 25–34.
5. Shdaifat, E., Al-Shdayfat, N., & Al-Ansari, N. (2023). Professional quality of life, work-related stress, and job satisfaction among nurses in Saudi Arabia: A structural equation modelling approach. *Journal of Environmental and Public Health, 2023*.
6. Soltan, M. R., Al-Hassanin, S. A., Soliman, S. S., & Gohar, S. F. (2020). Workplace-related stress among oncologists: Egyptian single-centered observational study. *Middle East Current Psychiatry, 27*(19).
7. Tsegaw, S., Getachew, Y., & Tegegne, B. (2022). Determinants of work-related stress among nurses working in private and public hospitals in Dessie City, 2021: A comparative cross-sectional study. *Psychology Research and Behavior Management, 1823–1835*.
8. Vallone, F., Smith, A. P., & Zurlo, M. C. (2020). Work-related stress and wellbeing among nurses: Testing a multi-dimensional model. *Japan Journal of Nursing Science, 17*(4), e12360.
9. Vernekar, S. P., & Shah, H. (2018). A study of work-related stress among nurses in a tertiary care hospital in Goa. *International Journal of Community Medicine and Public Health, 5*(2), 657–661.