

Research Article

Exploring Work-related Anxiety Among Newly Graduated Nurses in the Riyadh Region

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Abstract

Background: Work-related anxiety among nurses has been linked to various issues, including a heavy workload, work-related conflict, a lack of resources, and stress. This research aims to explore work-related anxiety among recently graduated nurses in Saudi Arabia's Riyadh region.

Methods: A descriptive, cross-sectional, and relational research design examined work-related anxiety among newly graduated nurses. A sample of 400 nurses was recruited from five Saudi hospitals in the Riyadh region. This study used the job anxiety scale (JAS) as a study tool. The tool is a self-rating scale of 70 items for assessing job anxiety but only 25 items were applied to this research. A self-administered questionnaire was used to gather demographic information.

Results: This study revealed that there was, overall, low work-related anxiety among the nurse participants. On the one hand, age, gender, educational qualification, job experience, workplace, and work scheduling (hours per week) were found to impact work-related anxiety substantially. On the other hand, work position, nationality, unit of care, and marital status were found to play no significant role in work-related anxiety.

Conclusion: The study's findings indicate the importance of paying more attention to workplace anxiety. As anxiety may affect nurses' ability to attend to the needs of patients in their care units, addressing it can reduce burnout and the desire to quit. Changes in work processes, care models, and leadership may be effective in creating a supportive environment that decreases stress and anxiety, promote learning, and provides patients with optimal and safe nursing care. Health policymakers and nurse managers in Saudi Arabia should develop particular intervention programs to reduce work-related anxiety among newly graduated nurses. Managers must seek techniques that help to adapt the present environment to the needs of nurses, as well as approaches that offer newly graduating nurses essential assistance, such as clinical supervision.

Keywords: work-related anxiety, workplace anxiety, newly graduated nurses, quality healthcare services, Riyadh region

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1. Introduction

Work-related anxiety, inexperience, emotional and physical stress, nursing shortages, bullying, and lack of support have been implicated in these difficulties and the subsequent abandonment of jobs [1, 2]. The Kingdom of Saudi Arabia's healthcare system is charged with the sole responsibility of meeting the basic healthcare needs of the Saudi people with high-quality services [1].

The profession is highly stressful and has a high prevalence of work-related emotional and physical burnout and anxiety [3]. This stress has necessitated rotational day and night shifts of 8 to 12 hours [4, 5]. However, the shift duration is sometimes unpredictable and is determined by inpatient needs and other staff issues. This leads to unplanned overtime, resulting in mental and physical distress and fatigue [6,7].

Several other studies have shown that newly graduated nurses face difficulties in adapting to their new jobs, which require them to practice in stressful, laborious, and complex work systems [8].

Work-related anxiety has been known to have several adverse effects on nurses. These include absenteeism, medical errors, impaired job performance, reduced mental acuity, musculoskeletal disorders, physical pain, social problems, mood changes, and mental issues [6, 9].

In the study conducted in Saudi Arabia by Waled, a descriptive cross-sectional result showed that the anxiety levels of the nurses in this study ranged from 0.60 to 1.52. The results of this study showed an inverse association between anxiety levels and critical care nurses' ages that were statistically significant. The critical care nurses in the hospitals in Albaha were only mildly anxious. Anxious mood, tension, insomnia, physical sensations, and terror are among the most frequently reported signs and symptoms of anxiety [10].

A descriptive cross-sectional study was conducted in Saudi Arabia the result revealed that the research cohort's nursing students experienced moderate stress from a variety of stressors. They frequently avoided the situation and in response, adopted a problem-solving strategy. To lessen stress among nursing students, institutions need to follow a set routine [11].

The present study aims to explore work-related anxiety among newly graduated nurses in the Riyadh region of Saudi Arabia and to measure its impact on delivering quality healthcare services. Exploring work-related anxiety amongst newly graduated

nurses will furnish hospital administrators, nurse managers, and other relevant authorities with the information needed to address this situation, improve the delivery of quality healthcare services, and help achieve Vision 2030.

This study aims to explore work-related anxiety among newly graduated nurses in the Riyadh region of Saudi Arabia.

2. Methods

2.1. Research design

The present study employed a descriptive, cross-sectional, relational research design to assess work-related anxiety in newly graduated nurses in the Riyadh region of Saudi Arabia.

2.2. Study setting

This study was carried out at five hospitals in Riyadh, Saudi Arabia: King Saud Medical City, Al-Iman Hospital, Diriyah Hospital, King Khalid Hospital, and Shaqra Hospital. In addition to serving as the nation's capital, Riyadh has a population of over 7.6 million, making it the city with the most residents in both Saudi Arabia and the Arabian Peninsula.

2.3. Study sample

2.3.1. Sampling design

The present study employed the convenience sampling method to recruit newly graduated nurses who had given their consent and met the study's inclusion criteria. Convenience sampling is a technique adopted in many disciplines to collect research data from an available pool of participants. It has several advantages, including quick data collection, cost-effectiveness, ease of use, and readily available samples [13].

2.3.2. Sample size

The total population of newly graduates was 1076 in the selected hospital.

The sample size (n) was determined using the following formula:

$n = z^2 \times p \times (1-p) / e^2$ where z is equal to 1.96 for a confidence level (α) of 95%, p is the proportion (expressed as a decimal) and e represents the margin of error. However, to an estimated sample size of 385, we added 5% for the attrition rate so the total should be $385 + 19 = 404$, but during data collection, we found that only 400 newly graduated nurses were recruited for this study for harmonization.

2.3.3. Inclusion and exclusion criteria

The inclusion criteria for this study are newly graduated nurses in their first year of employment who have freely given their consent to participate in the study. Nurses who do not meet these selection criteria, other healthcare professionals, and nurses with more than three years of experience were excluded.

2.4. Research Instruments

The present study employed the job anxiety scale (JAS) designed by Linden *et al.* [13]. The tool is a 70-item self-rating scale for assessing job anxiety including thoughts, feelings, and behavior, but only 25 items related to thoughts were applied to this study. It was divided into 14 subscales that were created with factor analysis. Each item is assessed on a five-point Likert scale, with 0 indicating no agreement and 4 indicating complete agreement. The overall intensity of work anxiety is computed as the mean score of the 70 questions.

The tool's retest reliability has been tested and confirmed to be $r(tt) = 0.82$ after 7–10 days interval of questionnaires on clinical samples in previous studies ($n = 611$; [13, 14]). A structured interview on workplace-related anxiety (work anxiety interview, WAI) was also used to provide convergent validity criteria for the scale validity [13].

2.5. Validity and reliability of the instrument

The degree of consistency with which an instrument measures an attribute determines how reliable it is as a target attribute. For this study, a principal component analysis was carried out, and the summary result showed no component variable less than 0.4 (<0.4). Bartlett's test of sphericity analysis for each sub-domain of the questionnaire was significant (>0.05). Moreover, Cronbach's alpha value was excellent, beating satisfactory (0.94).

2.6. Data collection

Data were gathered using a self-administered questionnaire tailored to collect the demographic characteristics of the study subjects as well as a scale to assess their work-related anxiety. Questionnaires were used to collect data in this study because they provide a quick, efficient, and relatively cheap way of procuring large amounts of data from a large sample of participants. Ethical approval, institutional permissions, and the consent of study subjects were obtained, and data confidentiality was assured.

2.7. Data analysis

The Statistical Package for the Social Sciences (SPSS) version 22.0 was used to analyze the study's data. The qualitative data on the essential variables were provided in the form of frequencies and percentages, and descriptive statistics were used to describe the data. Meanwhile, the mean and standard deviation were used to characterize the quantitative data. The results were determined using a confidence range of 95%, and a p-value of 0.05 was chosen as the level of statistical significance. Finally, multiple linear (stepwise) regression was used to test more of the two items to assess the influence (if any) of gender, age, marital status, educational qualification, work experience, and other demographic variables on work-related anxiety, and whether recently graduated nurses in the Riyadh region of Saudi Arabia experience work-related anxiety and whether this worry affects their job performance.

3. Results

The findings of this study are presented in three main parts. 1) the demographic characteristics of the respondents used in this study; 2) statements related to the perceived extent of work-related anxiety among the participants; and 3) the relationship between work-related anxiety and the selected demographic variables.

Anxiety is one of the major factors responsible for newly graduated nurse turnover in Saudi Arabia's healthcare system. Therefore, there is a significant need to address work-related anxiety for the adequate sustenance of the healthcare sector and to ensure the availability of nurses. Exploring work-related anxiety amongst newly graduated nurses will furnish hospital administrators, nurse managers, and other relevant authorities with the information needed to address this situation, improve the delivery of quality healthcare services and help to achieve Vision 2030.

3.1. Demographic characteristics of the respondents

This section includes data about the respondents' gender, age, marital status, educational qualification, work experience, and other demographic variables.

In this study, 92.5% of the participants were Saudi nurses, and the mean age of the sample was 27.30 ± 5.28 years. More than half the participants (75.5%) were between 20 and 29 years old, while only 3.8% were 40 years old or above. About half the participants (51.2%) were single, while only 41% were married. Concerning the respondents' educational level, 49.2% of the participants had a diploma, while 38% had completed a bachelor's degree. The vast majority of the participants (80%) had worked for less than 1 year. More than half the respondents (86.5%) worked less than 50 hours and 37% worked in critical care units in the hospital. Approximately 87% of participants had a work schedule of fewer than 50 hours per week, and the workplace with the most participants in this study was King Saud Medical City (39%).

The second deals with statements related to the perceived extent of work-related anxiety among the participants.

Overall, the participants summary of the Likert score showed that the anxiety level per questionnaire of all respondents was 2.10, demonstrating that the respondents exhibit low overall anxiety.

The third shows the relationship between work-related anxiety and the selected demographic variables.

The results also showed that age, gender, educational qualification, work experience, workplace, and work scheduling (hours per week) significantly influenced work-related anxiety. However, work position, nationality, unit of care, and marital status did not significantly affect work-related anxiety.

4. Discussion

Work-related anxiety among nurses has been linked to a variety of causes, including overburdening workloads [15], conflicts with other healthcare providers [16], a dearth of resources [17, 18], exposure to death and dying, demographics, and workplace stress [19, 20]. Studies have shown that these factors (among others) contribute to increased anxiety levels among newly graduated nurses [21, 22]. The time between nursing school and becoming a registered nurse is fraught with anxiety, tension, and even dread [23, 24]. In a study conducted among recently hired nurses in Taiwan, the first year of a two-year residency course was associated with moderate anxiety and work stress [25].

TABLE 1: Socio-demographic characteristics of respondents N = 400.

S/N	Category	Sub-category	Frequency distribution	
			N	%
	Gender	Male Female	84 316	21 79
	Age	20–29 30–39 40 and above	302 83 15	75.5 20.7 3.8
	Mean ± SD		27.30 ± 5.28	
	Marital status	Single Married Divorce Widower	205 164 24 7	51.2 41 6.0 1.8
	Educational Qualification	Diploma Bachelor Postgraduate studies	197 152 51	49.2 38 12.8
	Nationality	Saudi Non-Saudi	369 31	92.5 7.5
	Work experience	Less than 1 year 1–2 years	320 80	80 20
	Unit of care	Critical areas General ward OPD and others Nursing office	148 143 60 49	37.0 35.7 15.0 12.3
	Work position	Staff nurse Head nurse	393 7	98.3 1.7
	Work place	King Saud Medical City Al-Iman Hospital Diriyah Hospital King Khalid Hospital Shaqra Hospital	155 89 78 45 33	38.8 22.3 19.5 11.3 8.2
	Hours of work per week	Less than 50 h More than 50 h	346 54	86.5 13.5
	How long have you worked at the hospital	Less than 1 year 1–4 years	328 72	82.0 18.0
	Answers in the following questionnaire relate to	Current workstation Last job	324 76	81.0 19.0

About a fifth of the participants in a sample of similar Greek Critical Care nurses reported experiencing moderate to severe anxiety [26]. Meanwhile, a Chinese study found that nearly 44% of Chinese nurses dealt with some form of anxiety (19). Finally, a study of Iranian nurses echoed the same findings [27].

However, following the study's null hypothesis and contrary to the literature mentioned above about similar study designs, individuals in the current study generally indicated no prevalent work-related anxiety. Even though most participants had a year or lesser work experience, this finding can be explained by the fact that most had passed the probationary evaluation phase. This fits with the results of an observational study with a different sampling technique used in purposive sampling by Alhroub *et al.* [28] on the anxiety levels of newly hired nurses at a Jordanian cancer hospital. The authors found that the anxiety levels of newly employed nurses consistently increased from the start to finish of the general nursing orientation program (GNO) and that these levels began to fall after three months [28].

TABLE 2: Work-related anxiety Frequency Distribution N = 400.

Item		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
"The circumstances at my workplace makes me sick."	Number	254	44	60	24	18	400
	Percent (%)	63.5	11.0	15.0	6.0	4.5	100 %
"When thinking about my workplace, everything in my body is tense."	Number	200	88	68	32	12	400
	Percent (%)	50.0	22.0	17.0	8.0	3.0	100%
"Even in my free time, I continue thinking about work."	Number	185	107	66	33	9	400
	Percent (%)	46.3	26.8	16.5	8.3	2.3	100 %
"When imagining having to pass a complete working day at this workplace, I get feelings of panic."	Number	130	154	72	28	16	400
	Percent (%)	32.6	38.6	18.0	7.0	4.0	100 %
"I have experienced symptoms like trembling, blushing, sweating, or racing heart in some situations in my workplace."	Number	129	151	70	43	7	400
	Percent (%)	32.3	37.8	17.5	10.8	1.8	100%
"I have miserable feelings at my workplace that restrict my capacities for achievement."	Number	141	136	73	38	12	400
	Percent (%)	35.3	34.0	18.3	9.5	3.0	100%
"I suffer because I cannot be sure that everything will not change at work."	Number	129	140	78	44	9	400
	Percent (%)	32.3	35.0	19.5	11.0	2.3	100%
"Colleagues or family have told me that I should not always worry so much about work."	Number	139	128	81	39	13	400
	Percent (%)	34.8	32.0	20.3	9.8	3.3	100%
"I do not know how to react when I am confronted with new tasks at work."	Number	156	124	68	42	10	400
	Percent (%)	39	31	17.0	10.5	2.5	100%
"The conditions under which I work make me nervous."	Number	140	128	79	36	17	400
	Percent (%)						

TABLE 2: (Continued).

	Percent (%)	35	32	19.8	9.0	4.3	100%
"My sleep is worse before working days in contrast to non-working days."	Number	150	119	80	40	11	400
	Percent (%)	37.5	29.8	20.0	10.0	2.8	100%
"My work ruins my state of health."	Number	147	136	69	37	11	400
	Percent (%)	36.8	34.0	17.3	9.3	2.8	100%
"Whenever possible, I avoid coming near the site of my workplace."	Number	148	135	64	42	11	400
	Percent (%)	37	33.8	16.0	10.5	2.8	100%
"In my work, one does not get the proper salary for the achievements that one has to do."	Number	151	122	72	42	13	400
	Percent (%)	37.8	30.5	18.0	10.5	3.3	100%
"When I see colleagues or superiors from a distance outside my workplace, I try not to meet them directly."	Number	136	138	77	35	14	400
	Percent (%)	34.0	34.5	19.3	8.8	3.5	100%
"I had to go on sick leave once or several times because I could not stand the problems at my workplace any longer."	Number	128	146	76	36	14	400
	Percent (%)	32.0	36.5	19.0	9.0	3.5	100%
"On my way to my workplace, I would rather turn and walk back."	Number	127	146	76	37	14	400
	Percent (%)	31.8	36.5	19.0	9.3	3.5	100%
"I make many mistakes at work, or I am too slow."	Number	129	135	82	40	14	400
	Percent (%)	32.3	33.8	20.5	10.0	3.5	100%
"I have experienced a terrible event at the workplace that is still present in my mind and makes me feel frightened at work."	Number	151	125	70	41	13	400
	Percent (%)	37.8	31.3	17.5	10.3	3.3	100%
"I feel unsure when somebody observes me."	Number	144	132	66	39	19	400

TABLE 2: (Continued).

	Percent (%)	36.0	33.0	16.5	9.8	4.8	100%
"My thoughts about work problems hinder me from carrying out other everyday activities."	Number	139	135	65	42	18	400
	Percent (%)	34.8	33.8	16.3	10.8	4.5	100%
"I have health-related impairments that reduce my capacities in working achievement."	Number	138	134	77	38	13	400
	Percent (%)	34.5	33.5	19.3	9.5	3.3	100%
"I fear that colleagues could judge me negatively because of my health impairments."	Number	132	140	85	31	12	400
	Percent (%)	33.0	35.0	21.3	7.8	3.0	100%
"I am suffering from worries that I cannot put aside or stop."	Number	118	157	77	34	14	400
	Percent (%)	29.5	39.3	19.3	8.5	3.5	100%
"The loss of my workplace is/would be existentially threatening."	Number	133	144	69	35	19	400
	Percent (%)	33.3	36.0	17.3	8.8	4.8	100%

TABLE 3: Shows the relationship between work-related anxiety and the selected demographic variables N = 400.

S/N	Demographic Factor	Chi-Square	P-Value
1	Gender	57.62	0.0001
2	Age	23.43	0.0001
3	Marital status	9.55	0.21
4	Educational qualification	32.09	0.0001
5	Work experience	38.61	0.001
6	Workplace	18.57	0.004
7	Hours of work per week	17.79	0.002
8	Nationality	4.26	0.22
9	Unit of care	10.27	0.18
10	Work position	13.44	0.08
11	Hospital tenure	31.01	0.0008

In comparison to a study conducted in Saudi Arabia by Waled with a similar design a descriptive cross-sectional result showed that the anxiety levels of the nurses in this study range from 0.60 to 1.52 was considered a very low level of anxiety [10].

The present study also found that the level of education a nurse possessed substantially influenced their level of work-related anxiety. According to Rambur *et al.* [29], who used a different study design, “The RN Job Analysis and Retention Study” (JARS nurses with a bachelor’s degree (BSN)”) were better able to handle occupational stress—a potential cause of anxiety—than their associate degree-holding counterparts. To better equip freshly graduated nurses and help them cope with the stress and anxiety of the nursing profession, it may be necessary to establish a structure that promotes the gradual advancement of all levels of nursing education to a minimum of BSN.

This is comparable to the advice given in a 2019 study on stress and coping mechanisms for student nurses in clinical training in Saudi Arabia, which suggests employing regular avoidance of circumstances and the use of problem-solving techniques in response. Institutions must adhere to a predetermined schedule to reduce stress among nursing students [11].

According to the present study’s findings, work hours per week also contribute significantly to work-related anxiety. This is consistent with several studies that have found a correlation between shift work and increased stress on the job. According to a cross-sectional epidemiological study in Eastern Saudi Arabia, nurses who experienced work-related stress and anxiety were more likely to have worked in shifts [30]. Moreover, a similar cross-sectional study design showed that longer shifts or work hours led to more work, such as the manual handling of equipment or patients, which was strongly linked to work-related stress [31].

The present study also indicated that demographic parameters such as work experience and age influenced the perception of work-related anxiety. This result is consistent with Abu-Feddeh and Darawad [32], a quantitative descriptive cross-sectional design with a similar sampling technique that found a strong correlation between age and workplace stress. The workloads of newly licensed nurses may increase as they age and take on more responsibility in the field. Moreover, registered nurses in hospitals report that excessive workload is a significant source of stress in their profession [33]. Ang *et al.* [34] a mixed-method sequential explanatory study corroborated these findings, reporting that nursing became more emotionally draining for respondents as they got older. Indeed, the emotional and physical demands of providing complex patient care can prove taxing for nurses (such as lifting and moving patients, rearranging duty schedules, and working longer hours [35]. In comparison to descriptive cross-sectional designs, patients’ illnesses and deaths raise nurses’ awareness of their aging and mortality, which may lead to higher emotional stress and anxiety [36]. In comparison with different designs of qualitative research, the fact that most of the participants in

this study (75.5%) were still relatively young (20–29 years) may also help explain the lack of a noticeable trend toward work-related anxiety.

Based on the findings of this study, neither a work position nor a unit of care played a significant role in predicting work-related stress. However, this observation is at odds with the results of Alhroub *et al.* [28], who found that newly hired nurses in a general hospital unit reported much higher work stress than those in an emergency or operating room. Keskin *et al.* [37] showed a similar effect of work stress and anxiety: increased workload and the number of patients in general care units contributed to feelings of anxiety and depression amongst nurses. These variations in occupational stress and anxiety are attributed to the larger number of patients in the general ward, the higher complexity of their treatment, the greater likelihood that the nurses will work overtime [38, 39]. A possible explanation for the present study's contrary finding may be that most participants (37%) worked in critical units. Nevertheless, the results of this study are consistent with those of Blomberg *et al.* [40], a cross-sectional design that found that recent nursing graduates had similar stress levels regardless of their placement.

4.1. Limitations

When interpreting the findings, it is essential to keep the study's limitations in mind. First, the current study relied on convenience sampling, which could reduce the results' generalizability. Second, the use of self-reported questionnaires is another limitation, as it depends on the study participants' honesty and may thus lead to under-reporting of anxiety. Third, the researcher's capacity to collect sensitive data on work-related anxiety among the study participants may have been limited by the use of quantitative methods. Fourth, 20% of the nursing participants had experience of more than a year. This may have led to lower anxiety and work stress levels than if all participants had less than a year of experience.

5. Conclusion

The current study explored the significant factors contributing to work-related anxiety among newly graduated nurses in Saudi Arabia. Overall, there was low perceived anxiety at work among the participants. However, some demographic characteristics, including gender, education level, work experience, and scheduling, were linked to anxiety; these characteristics were found to play a significant role in the perception of work-related anxiety. The study's findings suggest that it is necessary to pay more

attention to workplace anxiety, which may affect nurses' capacity to attend to the requirements of patients in their care units. To provide safe patient care, nursing administrators must be involved in efforts to adjust nursing programs and implement the necessary techniques to lower anxiety and stress levels among newly graduated nurses, helping them settle into their new responsibilities without difficulty. The study implies that Saudi Arabian health policymakers and nurse managers should create specific intervention programs to lessen work-related anxiety in recently graduated nurses. Managers must look for methods that assist in adapting the current environment to the demands of nurses as well as strategies that provide recently graduated nurses with crucial support, such as clinical supervision. The researcher suggests that additional research on anxiety be done using a different sampling strategy.

6. Recommendations

More attention must be paid to work-related anxiety and stress among newly graduated nurses in order to reduce burnout and the intent to quit. During their orientation phase, newly graduated nurses should attend training classes on how to react effectively to challenging work situations, which may help reduce the detrimental effects of stress. In addition, mindfulness-based stress reduction (MBSR) programs and online peer support [41] can help new nurses transition better into their nursing careers. Such programs could be included as part of nursing residencies.

Nurse managers should put in more effort to guarantee that newly hired nurses will have more suitable job responsibilities and nurse-to-patient ratios. Managers must look for methods to adapt the current environment to nurses' needs and strategies that provide newly graduating nurses with essential assistance, such as clinical supervision. Nurse supervisors must consider that these nurses are new and inexperienced and work in an environment that places significant expectations on them. A change in workflows, care models, and leadership may help create a supportive environment that reduces stress and anxiety, promote learning, and offers the best and safest nursing care for patients. It is challenging to change the nature of hospital practices and patient care to make the environment less stressful.

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Ethical Considerations

Ethical considerations were taken into account to ensure the confidentiality and privacy of the collected data, which were analyzed anonymously and only used for research purposes. A national bioethics certificate was obtained from the ethical research committee at King Saud Medical City Hospitals. RB Registration Number with KACST, KSA: H-01-R-053 IRB Registration Number U.S. Department of HHS IORG #: IORG0010374), and the study was approved by the Directorate of Health Affairs in Riyadh, Saudi Arabia. Before the commencement of the study, ethical approval was also obtained from the Ethics Department of Majmmah University, and hospital officials were informed about the study's aim and scope.

All participants were granted informed consent after receiving clear information about this research; also, they were reminded that they might drown at any time.

Competing Interests

The author declares no conflicts of interest in this paper.

Availability of Data and Material

Data is available with the corresponding author upon request.

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