

The Relationship between Job Stress and Job Satisfaction among Saudi Nurses: A Cross-Sectional Study

Omar Ghazi Baker¹, Bandar Dhafer Alshehri²

¹College of Nursing, King Saud University, Riyadh, Kingdom of Saudi Arabia

²Nursing Administration Department, King Saud Medical City, Riyadh, Kingdom of Saudi Arabia

Corresponding Author: Omar Ghazi Baker (obaker70@gmail.com; obaker@ksu.edu.sa)

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ABSTRACT

Background: The productivity of nurses and patient healthcare is highly influenced by nurses' stress-related factors and job satisfaction. Nursing is the least preferred career opportunities for Saudi residents as compared to other options. Nurses' perceptions of intention to quit contributes to their shortage in Saudi health care institutions.

Purpose: The study aimed to examine the relationship between work-related stress and job satisfaction among Saudi nurses working at a public hospital.

Methods: The research used a cross-sectional design that collected data from samples of 297 nurses working at a specified public hospital and aged over than 20 years old. Convenient sampling was employed to recruit the samples. Data were collected using the Expanded Nursing Stress Scale (ENSS) and Job Satisfaction Scale (JSS). The Statistical Package for Social Sciences (SPSS) version 20.0 was applied, and Pearson's correlation test was to identify the relationship between variables.

Results: The results indicated that the nurses at the hospital where the study took place experienced low levels of stress with a mean value of 2.1995. Besides, the nature of work indicated maximum job satisfaction with a mean value of 15.666, whereas minimum job satisfaction levels (11.569), were related to benefits provided to nurses. A positive correlation was found between the level of stress and satisfaction with a p-value of 0.041.

Conclusion: The stress factors were highly correlated with job satisfaction. The identification of stress factors is important as it may create a negative impact on patients' care and their well-being. It is suggested that changes in managerial affairs and policies are essential for implementing beneficial strategies that may assist in resolving the issue.

Keywords: Nurses; patient care; Saudi Arabia; work-related stress

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BACKGROUND

Nurses are considered integral for ensuring the nation's adequate health, while studies have recognized it as the most stressful profession (Chien & Yick, 2016; Muhawish, Saleem, Baker, Elbilgahy & Hashem, 2019). Muhawish et al. (2019) stated that stress

jeopardizes individual and organizational efficiency. For instance, it causes an adverse impact on the nurse job satisfaction, well-being, and health at an individual level, and leads to increased turnover and absenteeism at an organizational level. This eventually causes an adverse impact on healthcare efficiency and quality (Sharma et al., 2014).

Stress can also transform into a negative phenomenon if it is intense and continuous, leading to physical illnesses and psychological disorders (Gulavani & Shinde, 2014). AbuRuz (2014) stated that undesirable consequences result due to work-related stress among nurses that decreases their level of job satisfaction. Chien and Yick's (2016) study provided an international perspective concerning nurse stress and strain. The study confirmed it as the most stressful profession across different industries and on a global scale. This is also evident from its prevalence at 55% (Nasr-Esfahani, Masoumi & Mohamadirizi, 2017). Dagget, Molla, and Belachew (2016), further showed that job-related stress affects 9.2-68% of the total nurse population. Job satisfaction is among the most significant organizational problem concerning job stress (Hosseiniabadi & Etemadinezhad, 2018; Nehrir, Ebadi, Tofighi, Karimi Zarchi, & Honarvar, 2010; Shahnazi, Daniali & Sharifirad, 2014). There is an increase in the level of self-confidence, improved physical, mental and social health, improved communication, and reduction in the level of psychological distress due to job satisfaction (Shahnazi et al., 2014). Other factors such as salary, job dimensions, company policies, and personality characteristics also affect the level of job satisfaction among nurses (Emadzadeh, Khorasani & Nemtizadeh, 2012).

Nurses experience a variant level of job stress when they are unable to meet the work requirements that negatively affect their performance, leading to job dissatisfaction. Previous research reported a positive association between job satisfaction and staff performance (Mohammadi, 2016). Also, similar findings were reported by a study conducted among Saudi nurses working in the critical care unit (Awajeh, Issa, Rasheed, & Amirah, 2018).

The environment is usually stressful due to different factors where in which nurses work. Soltanmoradi, Ansari, and Heidari (2017) determined the sources of stress among Iranian nurses working in the University of Medical Sciences, Iran. Among various reasons, death and dying were the most top-rated situations that were stressful for Iranian nurses. In contrast to this, discrimination among nurses was identified as the least stressful variable. Another common reason includes treatments related to various uncertainties. Similarly, the rate of stress in the general operating rooms was significant, with the highest mean scores of conflicts with a physician along with inadequate preparation (Soltanmoradi et al., 2017).

Chaudhari, Mazumdar, Motwani and Ramadas (2018) conducted a study to further highlight the levels of occupational stress among western nurses. The results showed that almost half of the overall nurses experienced mild stress; the other 34% experienced moderate stress. The remaining 2% of nurses experienced high-level stress. Besides, the study has identified different reasons that serve as the sources of stress among American nurses. The factors include conflicts with families and supervisors, and increasing workload serves as the leading cause of stress. Similarly, nurses with professional

experience of almost 6-10 years faced maximum stress. Jackson (2016) pinpointed the sources of satisfaction among nurses; the factors, include maximum level of age (oldest or youngest), nurses with master's degree, and females belonging to two or more races.

García-Izquierdo, Meseguer de Pedro, Ríos-Risquez and Sánchez (2018) showed that stress emerges due to interpersonal conflicts, inadequate social support, and patient-induced violence, which leads to burnout development (chronic stress). To subside its impact, nursing attitude and their relationship with their peers, colleagues, and supervisor are found to reduce their stress levels. The offering of economic benefits, including a better salary, can lead to a reduced stress level and induces job satisfaction. This highlights the need for a study that analyses the correlation between job stress and job satisfaction level to help overcome the adverse outcome on nurses, facilitating the provision of better care quality.

Similar to other countries, the Saudi healthcare sector is also found to suffer from increased stress leading to nurse shortage. Almajwal (2016) noted a shortage of nurses in Saudi Arabia, which present only 25% of the overall workforce. In addition, Saudi Arabia experiences a shortage of nursing staff with one nurse for 296 patients, unlike the developed countries having one nurse for 135 patients (Ministry of Health [MOH], 2012). Besides, the ratio of population and nurses is also projected to be below the developed countries (World Health Organization, 2018), emphasizing a further analysis of nurses' job satisfaction and stress level. Further, studies also indicate that workload increases due to nurse shortages, leading to psychological distress (Li et al., 2016), which is likely to affect the care delivery to patients. Based on each nurse's individual differences, there is an increased chance of developing work-related stress that leads to differences in job satisfaction. For instance, almost 3,950 nurses in King Saud Medical City received 1.06225 million patients within one year. Thereby, continuous complaints are received by nurses regarding work-related stress. A previous study showed that health care systems and patient care is negatively affected as a result of stress, depression, job satisfaction, and psychological distress (Salam, 2016). Improved quality of care and a reduction in medical errors are possible when work-related stress is reduced and job satisfaction is increased among the nurses. This also helps contribute to the Saudization policy of the country (Alboliteh, Magarey & Wiechula, 2017).

Previous studies have indicated a more significant influence of stress on job satisfaction of nurses. The complexity of critically ill patients' circumstances and workload in the hospital put forth nurses under further stressors. A research study is needed to reduce the adverse outcomes on nurses, correlating the role of job stressors on the satisfaction rates of nurses. In this research, the researchers have hypothesized a correlation between the two factors: job satisfaction and job-related stressors among nurses. Therefore, there is a need to investigate the relationship between work-related stress and job satisfaction to direct the administrators towards reducing stress and increasing job satisfaction among nurses in Saudi Arabia.

PURPOSE

The present study aimed to examine the relationship between work-related stress and job satisfaction among Saudi nursing staff.

METHODS

Research design and participants

The study adopted a cross-sectional design to investigate the relationship between work-related stress and job satisfaction among Saudi nurses. The emergency department, intensive care unit (ICU), surgical ward, neuroscience ward, dialysis ward, and pediatric ward in a public hospital in Riyadh, Saudi Arabia, were approached for collecting data from nurses. These units were incorporated, given the lack of studies concerning the cumulative effect.

The samples comprised 297 nurses that were recruited using a convenient sampling method, which provided a minute opportunity to control for biases. The sample size was computed using the sample size formula, where the population was 1,000. The error of margin was kept at 5% and the confidence interval at 95%. The sample size for it should be at least 278. The targeted sample size was justified using the Raosoft sampling size formula. The nurses who were above 20 years old, registered nurses, and working at the specified hospital fulfilled the inclusion criteria. No confounding factors were used to confine the sample size. Among them, those who gave consent to participate in the study were recruited. The nurses lacking any of these qualities were excluded from this research. Figure (1) depicts the overall selection procedure.

Research instrument and data collection

The data in this study were collected using the Expanded Nursing Stress Scale (ENSS) and Job Satisfaction Scale (JSS) (original versions) between July 2017 to December 2017. Job-related stressors among nurses were measured using the ENSS, an expanded and updated revision of the classic Nursing Stress Scale (NSS) developed by Gray-Toft and Anderson (1981). The ENSS is a validated and widely used scale to assess work associated stress among nurses (Milutinović, Golubović, Brkić & Prokeš, 2012). In connection with the changing times of the domestic work environment in nursing, the ENSS scale is also the updated version of NSS to accommodate the effect of stressful conditions such as the dying and death of patients, unfair demands of patients and their families, various violence, conflict with peers, conflict with physicians, working with opposite gender nurses, or discrimination are the recent problems faced by the nurses (French, Lenton, Walters, & Eyles, 2000). Meanwhile, the JSS is also a validated tool to assess job satisfaction level in hospital jobs and on nursing staff (Kvist et al., 2012).

The ENSS targets the prevalence of stress among the nursing staff by measuring the frequency and major sources of stress in patient care situations similar to that of NSS. However, NSS is updated to ENSS to accommodate the change in stress factors with respect to the changing nursing environment. The degree to which people like their jobs was assessed through JSS (Spector, 1985). This scale provides an overall job satisfaction score after the assessment of nine facets that include: pay, promotion, supervision, fringe benefits, contingent rewards, operating conditions, coworkers, nature of work, and communication. The questions were responded on a 6-point scale for each item (1=much disagreement, 2=disagree moderately, 3=disagree slightly, 4=agree slightly, 5=agree moderately, and 6=agree very much). The values for stress level were differentiated in three sections: continuum, descriptive meanings (0-0.99 = does not apply, to 4.0 and above = above extreme), and overall meaning interpretation (0-0.99 = no stress, to 4.0

and above = very high level of stress). In addition, satisfaction was measured on a three-item scale (4.00-12.00 = dissatisfied to 16.00-24.00 = satisfied).

In the present study, Cronbach's coefficient alpha was calculated for determining the reliability of the subscales of ENSS (Milutinović et al., 2012) and NSS (Gray-Toft & Anderson, 1981). The alpha scores of the questions ranged between 0.70 to 0.85, showing good reliability. The validity of the questionnaire was calculated with proper designing, piloting, and addressing the reference group's feedback.

The questionnaires were administered to the nurses with the presence of a researcher for clarifying unclear questions. Similar instructions were provided to all recruited nurses. Enough time was provided to the nurses for filling the questionnaires and this entire procedure was completed in four weeks.

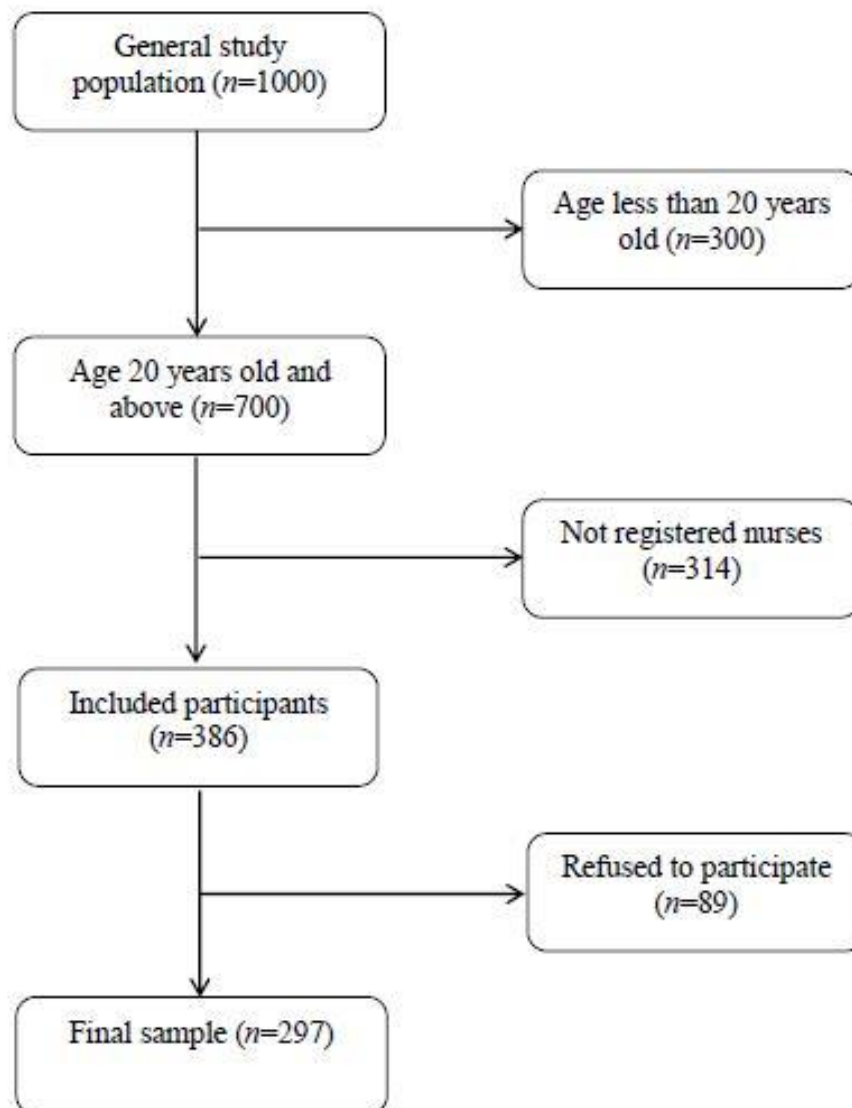


Figure 1. Participants' selection

Data analysis

The data collected through the questionnaires were coded and entered on the excel sheet for analysis. The completeness of the questionnaire was verified after completing the procedure of data collection. The data from excel was coded and analyzed using Statistical Package Social Science Software (SPSS) version 20. The characteristics of nurses and the level of stress and satisfaction among them were determined using the descriptive statistics, whereas the relationship between stress and job satisfaction among nurses was investigated using Pearson's correlation test.

Ethical considerations

This study was approved by the Institutional Review Board (IRB) of King Saud University [Ref. No. 17/0292/IRB, 29 March 2017]. Permission to use the ENSS and JSS in this study was also obtained from their original authors. All the recruited nurses were explained of the study's purpose and procedures. Also, a sign was obtained for an informed consent form explaining their rights in the study.

RESULTS

Demographic characteristics of the respondents

The results of this study showed that the majority of the respondents were females, with an overall percentage of 89.9%, and belonged to the age group between 20-30 years old, with a given percentage of 53.5%. Furthermore, most of them (75.4%) were holding Bachelor's degree and working in the unit with a duration of above 4 years (52.5%). Similarly, 82.2% of nurses were working in the night shift, while 82.2% of nurses were on rotation shifts. Most nurses were employed as registered nurses, between 5 to 10 years, with a given percentage of 40.4%. Concerning the nurses' level of salary, most of the nurses were paid between SAR 5,000 to 10,000 (65.7%). Table 1 provides a detailed description of the characteristics of the respondents.

Level of stress and satisfaction among nurses

Table 2 provides results related to the level of stress among nurses. According to the results, the given participants' stress level is low, with a mean value of 2.1995. Regarding the level of satisfaction among nurses, findings proposed that most of the nurses were dissatisfied with the benefits provided to them, with a mean value of 11.569. Contrary to this, maximum satisfaction was provided for the nature of work with a mean value of 15.666.

The correlation between the level of stress and satisfaction is provided in Table 3. Results indicate a positive association between the level of stress and promotion, with a significant p-value of 0.041. Moreover, participants with maximum satisfaction level in terms of the level of promotion usually experience maximum stress. In contrast to this, participants with low satisfaction level towards promotion experience minimum stress. Therefore, the results indicate that the level of satisfaction among nurses is not entirely related to stress.

Table 1. Demographic characteristics of respondents (n=297)

Demographic characteristics	Frequency (f)	Percentage (%)
Gender		
Male	30	10.1
Female	267	89.9
Age		
20-30 years	159	53.5
31-40 years	110	37.0
41-50 years	27	9.1
>50 years	1	0.3
Marital Status		
Single	120	40.4
Married	177	59.6
Education Level		
Diploma	70	23.6
Bachelors	224	75.4
Masters	3	1.0
Duration in the unit		
<1 year	41	13.8
1-4 years	100	33.7
>4 years	156	52.5
Shift		
Day	53	17.8
Night	244	82.2
Nature		
Day	53	17.8
Night	0	0
Rotating	244	82.2

Table 2: Level of stress and satisfaction among nurses (n=297)

	N	Min	Max	Mean	SD	Remarks
Stress	297	0.67	4.00	2.1995	0.61159	Low stress
Satisfaction (Subscales)						
Pay	297	4.0	23.0	12.808	3.922	Ambivalent
Promotion	297	4.0	23.0	12.053	3.647	Ambivalent
Supervision	297	4.0	24.0	13.976	4.143	Ambivalent
Fringe/Benefits	297	4.0	21.0	11.569	3.840	Dissatisfied
Contingent	297	4.0	24.0	12.181	4.231	Ambivalent
Operating	297	4.0	20.0	12.612	3.435	Ambivalent
Conditions						
Coworkers	297	7.0	24.0	14.828	3.446	Ambivalent
Nature of Work	297	5.0	24.0	15.666	4.477	Ambivalent
Communication	297	4.0	24.0	13.478	3.88	Ambivalent
Satisfaction	297	71.0	186.0	119.1	20.63	Ambivalent

Table 3: Correlation between levels of stress and satisfaction among nurses (n=297)

Components of Satisfaction	Level of Stress	Pearson's Correlation
	Point Biserial Correlation	p-value
Stress	1	
Pay	0.82	0.161
Promotion	0.119*	0.041
Supervision	0.057	0.327
Fringe Benefits	0.017	0.771
Contingent	-0.006	0.921
Operation	-0.062	0.288
Co-workers	0.030	0.610
Nature of work	0.086	0.139
Communication	0.039	0.500
Satisfaction	0.071	0.225

*Correlation is significant at the level of 0.05

DISCUSSION

The study intended to explore the relationship between stress and job satisfaction among nurses through various variables. The health care manager, nursing instructors, and hospital policymakers would be able to provide appropriate strategies and programs for promoting job satisfaction by understanding the association between job-related stress and job satisfaction among the nurses. The level of productivity and efficiency among nurses is likely to increase by promoting job satisfaction, which would improve their performance (Ella, Asuquo, Akpan-Idiok, & Ijabula, 2016).

Results in this study have indicated that supervision, operating conditions, nature of work, satisfaction and communication are associated with high-level job satisfaction among nurses. These results are supported by Loh, Gan, Lim, Loh, and Yong (2016), which showed that supervisor's support provided a positive influence on job satisfaction among nurses. Kula and Guler (2014) also indicated similar findings and concluded that supervisor support is important in providing job satisfaction to nurses (Kula & Guler, 2014). Results of the present study are also endorsed by Saleh, Saleh, and AbuRuz (2013), as the maximum level of job satisfaction among nurses was related to the nature of work with a mean value of 4.46. However, the minimum level of job satisfaction was related to the operating conditions with a mean value of 2.85.

The findings highlight that the work environment and job-related benefits of the health care organization should be redesigned for promoting positive outcomes. This involves the instigation of a better system that uses transparent practices concerning the reporting and as well as providing support for improved satisfaction level. The practitioners are suggested to introduce different reimbursement practices that recognized nurses' high performance and productivity. This could be based on fewer complaints of the patients or on regularity, as these are the primary factors that affect the care quality. Improvements should be instigated in terms of individual responsibilities, work delegation, and breaks

to help eliminate the stress-inducing promoters. To ensure healthy interaction among the staff and the patient, different strict protocols can be implemented.

Nurses should be provided with counseling sessions as well as practices that enable them to communicate with the patient and the staff, and this should follow a continual screening procedure where nurses are frequently screened for identifying any psychological distress (Villani et al., 2013). Also, policies should be implemented by the Ministry of Health and the management of the hospital to address the factors that lead to stress. Besides, different psychological distressed interventions could be performed to improve the nurse satisfaction level (Heath, Sommerfield & von Ungern-Sternberg, 2020). The curriculum highlighting the stress-inducing factors should also be introduced along with the different interventions that can be applied for reducing it.

Results indicated that the majority of the nurses belonged to the age group between 20-30 years, while 40% of the total nurses were employed as registered nurses from 5-10 years. Salaries for most of the nurses ranged between SAR 5,000-10,000. The literature suggests that job satisfaction leads to decreased job-related stress. Kvist et al. (2012) further suggests that this job satisfaction is related to the perceived quality of care provided by their unit. Holmberg, Sobis, and Carlström (2016) found a strong correlation between a good salary and job satisfaction. As in this study, the nurses had a steady salary and were mostly registered for 5-10 years; the results indicated low levels of stress among the given sample of nurses. Participants that enjoy maximum promotion usually experience a high level of stress. This could be due to the effect of promotion on job performance. Razak, Sarpan, and Ramlan (2018) posit that promotion to dominant or positions with responsibilities often affects job performance, which could lead to added job-related stress. Results of the study are in contrast to those proposed by Jawad, Jeffery and Wanton (2015), according to which, the level of stress among nurses increases with the deaths of patients. In contrast to this, the minimum stress level was related to the emotional needs of patients.

Similarly, results of the present study are in contrast to the results proposed in the study of Galdikiene, Asikainen, Baciunas, and Suominen (2016). They posit inadequate preparation of nurses, conflicts with a physician, problems with supervisor and coworkers, served as the major stress factors among nurses. Also, most of the nurses, when working as a team, experienced stress due to treatment uncertainties. Chatzigianni, Tsounis, Markopoulos, and Sarafis (2018) provided conflicting results regarding age and stress among nurses. According to the findings, nurses aged between 30-34 years experienced maximum stress and vice versa. The findings contradict the results proposed in the present study since the study's maximum population belongs to the age group between 20-30 years.

There was a positive and significant impact on nurses' perceptions of their promotion on their job stress. Consequently, the impact of effective promotion in the work environment is examined on the individual, including job satisfaction. The transmission of information can be obstructed in multicultural personnel such as the ones revealed in the industry because of differences in values, beliefs, religion, attitudes, behaviors, education, and cultural norms of individuals. Increased job satisfaction, enhanced working conditions,

and additional opportunities for professional growth were the reasons cited for returning to nursing profession. Likewise, nurses' professional growth is improved by educational opportunities and therefore had a substantial influence on job satisfaction.

Transparent organizational policies are required to increase communication satisfaction and influence nurses' intention to leave health institution jobs to a greater extent. Staff should be aware of better communications throughout the institution and be able to play an active role in solving issues that root from the paucity of communication. In this regard, the support of the systematic enhancements and hospital administration for all staff will be required for assuring communication satisfaction among nurses. Efficient feedback frameworks can be developed for nursing applications to reduce the communication chaos and conflicts faced by nurses in health care centers. Administrators can reduce nurses' intention to quit by facilitating them with a trust-based work environment and giving them a higher quality of work life.

Several factors are highlighted that create a valuable impact on job satisfaction among nurses. The identification of stress factors is important as they may create a negative impact on patients' care and their well-being (Arnetz, Sudan, Goetz, Counts & Arnetz, 2019). Nurses also reflect a sense of dissatisfaction with their jobs resulting in high turnover rates and absenteeism, which directly impacts the quality of patient care (Arnetz et al., 2019). According to the given results, nurses enjoying maximum promotions have a significantly high level of stress. Maximum job satisfaction was related to the nature of work. The results of the study are important as they provide an important evaluation regarding the stress factors among nurses. This provides a responsibility to nurses' managers to make important measures that may reduce the level of stress among nurses while providing maximum job satisfaction. The results provided in the study exposed several different factors that may directly impact the level of job satisfaction among individuals. Change in policies and managerial affairs are important to implement useful strategies that may help to resolve the issue.

Despite the abundant information, the research involves certain limitations in the form of time and financial resources. The use of a cross-sectional study design limits the study results as the cause of the stress cannot be determined. It was also conducted on a single institute, which limits its results generalization to a greater population. The study is further limited due to the small sample size, as some of the nurses refused to participate due to work management or unavailability. This provides an opportunity for future researchers to conduct the study by involving a large sample in other Saudi Arabia hospitals. Findings provided in the study are important and can be implied in other Saudi Arabia hospitals to a certain extent. Further studies help policymakers make important measures regarding stress factors among nurses working in the specified hospital where the study took place. Future studies can include the qualitative research design for comprehensively evaluating the different stress-inducing factors. Also, different interventions can be introduced and evaluated concerning its impact on the nurse stress level as well as satisfaction.

This study has recommended that the shortage of nurses in Saudi Arabia can be handled by appropriate nursing management by making enhancements in communication

satisfaction and work environment, as this would reduce nurses' intention to quit. Thereby, the nursing management bodies should emphasize promoting a professional practice environment to protect job satisfaction among nurses. Consequently, healthcare centers can accomplish the objective of providing quality care to the patients. The goal of patients' enhancement is directly proportional to the better professional work environment in the job satisfaction and well-being among nurses.

CONCLUSION

This cross-sectional study showed the relationship between work-related stress and job satisfaction among Saudi nurses involved in the study. Using the ENSS and JSS, the results depicted that the promotion of the nurses' help mitigates the stress level among them. The healthcare management at the hospital needs to induce different policies and practices that help overcome the professional outbreak among the Saudi nurses and improve their satisfaction level. These practices are likely to help improve patients' care and their well-being.

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COMPETING INTEREST:

The author declares no competing interest.

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