Original Article	www.wjahr.com

BURNOUT AND QUALITY OF LIFE AMONG NURSES AT HOSPITALS IN SAUDI ARABIA: A CROSS-SECTIONAL STUDY

Asma A. Alyaemni[1*], Abeer G. Alharbi[1], Razan Aljumaah[1] and Samiha I. Abdelkader[2]

[1*] Department of Health Administration, College of Business Administration, King Saud University, Saudi Arabia.
[2] Department of Health Rehabilitation Sciences, College of Applied Medical Sciences, King Saud University, Saudi Arabia.

*Corresponding Author: Asma A. Alyaemni
Department of Health Administration, College of Business Administration, King Saud University, Saudi Arabia.

ABSTRACT

Objective

Nursing is one of the most stressful professions in a complex environment and is associated with physical and psychological strain, job burnout, and dissatisfaction. This study aimed to measure the correlation between burnout and quality of life (QoL) among nurses working in multiple governmental hospitals in Riyadh, Saudi Arabia. **Methods** This cross-sectional study measured burnout using The Maslach Burnout Inventory (MBI-HS MP) and QoL Survey to measure the QoL of healthcare staff. Descriptive statistics were used to identify the level of burnout, and correlation tests were used to identify the relationship between burnout and the QoL scale. **Results** The participants included 172 male and female nurses. Burnout among nurses was at a medium level regarding emotional and blunted feelings, whereas the lack of accomplishment was low. Blunted feelings were the most prevalent among less-experienced nurses. Furthermore, emotional burnout was more prevalent among nurses working night shifts. **Conclusion** The findings showed that burnout is prevalent among nurses in Saudi government hospitals and negatively affects the quality of their lives. Resilience and emotion-coping interventions are recommended to reduce the effects of burnout and improve patient safety.

KEYWORDS: Burnout; Quality-of-life; Nurses; Governmental Hospitals.

INTRODUCTION

Burnout is the state of persistent physical, mental, and emotional fatigue caused by the continuing emotional stress in the workplace. According to Maslach's model (2001), the three components of burnout are emotional exhaustion, depersonalization, and reduced personal accomplishment.[1] Emotional exhaustion happens when the individual becomes emotionally drained and exhausted due to working in an extremely demanding environment. Depersonalization means becoming negative, rude, and detached when interacting with the patients or their families. Personal accomplishment refers to the diminished sense of competency and value usually caused by the negative view of one's capabilities. A number of research suggests that most nurses suffer from burnout.[2-6] Several studies in Saudi Arabia found similar results of high prevalence of burnout among nurses.[7-9] Nurses are prone to burnout because they work in a highly stressful environment and endure job stressors such as long working hours, the need to make quick decisions, poor management, and the stress of caring for patients with poor health status.[10]

Burnout has been shown to lead to adverse outcomes such as illness, absenteeism, and turnover.[11-14] Also, burnout has been found to affect the nurses' quality of life.[14-16] The term "quality of life" first emerged after World War II with the increasing understanding of social disparities. The quality of life describes the individual's health, comfort, and ability to enjoy life events. The quality of life can be measured using a range of elements of life that can be negatively affected by poor health, such as physical functioning, emotional health, and ability to assume work and social activities.

This study tries to assess the prevalence of burnout among nurses in a tertiary hospital in Saudi Arabia. In addition, the study tries to understand the effect of

burnout on the nurses' quality of life. The findings of this study should provide a better understanding of the phenomenon and subsequently help decision-makers develop appropriate strategies to address the problem.

Literature review
The cultural diversity of this system reduces the patient's ability to aid in rehabilitation. This increases stress among healthcare professionals, making it difficult for them to communicate effectively across cultures with one another and with patients.[9]

Using a self-reporting questionnaire and the MBI, a study in Riyadh with 300 nurses in Saudi Arabia explored the rate of burnout among critical care nurses in tertiary settings. The findings revealed that the prevalence of acute burnout was 65.9% among intensive care nurses.[17]

A previous local study conducted a cross-sectional study at four hospitals in Riyadh to determine burnout prevalence and root causes among healthcare professionals (HCPs) using the MBI. The findings revealed that the highest risk groups for burnout were doctors and nurses, with burnout being more common among those working in patient wards and emergency departments. The stress levels of Saudi doctors and nurses were also significant; young and inexperienced nurses were more likely to experience emotional exhaustion and decreased job engagement. The study also demonstrated that medical professionals such as nurses and doctors could not use stress reduction techniques.[9]

According to the World Health Organization, burnout impacts the physical, psychological, social, and environmental QoL. Nurses' QoL has been proven to be influenced by both employment and the environment. Connections between managers, peers, and coworkers can contribute to burnout.[18] Several studies have demonstrated the impact of the workplace and employment on nurses' QoL.[19]

After World War II, the term 'QoL' emerged in the United States, where it was restricted to owning or not owning everyday consumer items, such as owning a car, a private residence, and other necessities, which equates to wealth. However, this idea has changed and broadened over time to encompass things such as enhancing one's QoL, meeting one's wants and aspirations, changing, and taking better care of the environment. As a result, the QoL has changed from having some possessions to living well in a prosperous society.

Objective and subjective elements were considered to evaluate QoL. Economic status, education, domicile, employment, social connections, and family situation are examples of external variables. Moreover, mood, which is heavily influenced by genetics, also affects individuals.[20] Nursing has been reported to be one of the most stressful occupations. Multiple researchers have

reported that nurses working in hospital settings are more vulnerable to experiencing burnout as they usually work with limited work resources with increased workloads; at the same time, they are expected to show patience and empathy and be alert in stressful environments.[15, 21, 22] Nurses who experienced burnout were reported to be more inclined toward absence from work and occasionally impaired mental health conditions such as sleeplessness and depression.[23, 24]

METHODOLOGY
This descriptive cross-sectional study was conducted using a self-report questionnaire from March 1, 2023, to April 31, 2023, in Riyadh, Saudi Arabia. The online survey was sent to Riyadh's designated hospitals: King Abdullah University Hospital, King Salman Hospital, and Alyamamah Hospital. All facilities offer a wide range of medical services, including emergency, surgery, radiology, and laboratory services. The inclusion criterion was the recruitment of nurses with more than two years of work experience. The researcher described the study and the data collection process with the head nursing departments in designated hospitals before administering the questionnaires to participating nurses. All nurses were recruited into the study by advertisements and their acceptance to participate voluntarily, and their participation was anonymous. The study was conducted from April to May 2023.

The Maslach Burnout Inventory (MBI-HS MP) and The QoL Survey (QOLS) are valid instruments for measuring the QoL of healthcare staff. Permission to use these research methods was also granted. The questionnaire comprised 71 items to measure burnout and QoL variables. The burnout variable consisted of 23 items, and the QoL variable was 48. Paragraph responses were patterned using a five-point Likert scale (5-agree, 4-agree, 3-neutral, 2-disagree, and 1-disagree). Burnout factors included emotional burnout, depersonalisation (negative or cynical attitudes toward patients), loss of feeling, and personal achievement at work, as well as clinical symptoms such as fatigue, insomnia, emotional instability, headaches, irritability, eating problems, and rigidity in relationships with others. Physical, psychological, and social factors; work stability; and relationships with supervisors and colleagues evaluated their QoL.

Potential participants were invited via email. The survey required 20 min to complete. No personal information was collected. The questionnaire contained the contact information of the researcher so that respondents could consult for any questions or clarification. The participants were given one week to complete the questionnaire. Data were collected over three weeks.

A minimal but reasonable sample size was used for this study because of time and budget constraints. We based the desired sample size on the fact that the margin of error for a sample of 209 is 6.79% and that this figure is

considered a reasonable margin of error in surveys. A total of 172 nurses completed the survey.

We used the STROBE reporting guidelines for observational studies in the preparation of the manuscript. Data were coded, entered, and analysed by a descriptive statistical analysis (frequencies and percentages) using Statistical Package for the Social Sciences (SPSS 22). We measure the correlative scores and relationships between participants' burnout levels and QoL. Possible correlations between burnout effects and QoL in terms of age, gender, marital status, educational level, and years of work experience were also measured.

RESULTS

One hundred and seventy-two nurses participated in the surveys, 138 of whom were female. 40% were aged between 20 and 30 years old, 47% were aged 31-40 years old, and only 12% were above 40 years of age. Of the participants, 61% were married, 80% had 10 years of work experience, 43% worked for morning shifts, and only 16% worked in the night shifts **(Table 1)**.

Table 1: Demographic Variables.

	Variables	Number	%
Gender	Male	34	19.8
	Female	138	80.2
Age	20-30 years	70	40.7
	31-40 years	81	47.1
	41-50 years	21	12.2
Marital status	Married	106	61.6
	Unmarried	66	38.4
Hospital	King Abdullah university hospital	54	31.4
	King Salman hospital	36	20.9
	Alyamamah Hospital	82	47.7
Experience	Less than five years	32	18.6
	From 5 years to less than ten years	73	42.4
	From 10 years to less than 15 years	48	27.9
	15 years and over	19	11.0
Shift time	Morning	74	43.0
	Evening	69	40.1
	Night	29	16.9
	Total	**172**	**100**

The arithmetic means, and standard deviation (SD) have been calculated according to the whole scale and for each dimension and ranks as follows: from 1-1.80 for the shallow level, 1.81-2.60 for the low level, 2.61-3.40 for the medium level, 3.41-4.20 for the high level, and 4.21- 5 for the very high level. Burnout among nurses at multiple governmental hospitals in Riyadh, Saudi Arabia, was medium, and the average response on the entire scale was 2.84, with an SD of 0.347 **(Table 2)**.

Table 2: Sample responses.

No.	Expression	Mean	SD	Level of Burnout	Rank
1	Emotional Burnout	3.11	0.457	Medium	1
2	Blunted feelings	2.99	0.579	Medium	2
3	Lack of sense of accomplishment	2.37	0.432	Low	3
4	**Total score for burnout scale**	**2.84**	**0.347**	**Medium**	**4**

Emotional burnout and blunted feelings among nurses are 'medium' with average responses of 3.11 and 2.99, respectively. At the same time, the 'lack of sense of accomplishment' level is 'low' with an average response of 2.37. Pearson's correlation coefficient was used to determine the relationship between burnout and QoL **(Table 3)**. The correlation coefficient between the total score on the burnout scale and the QoL scale was 0.184, which was statistically significant ($p \leq 0.05$), indicating a positive statistically significant relationship between them. Furthermore, the correlation coefficient value reached the dimension between emotional burnout and the QoL scale (0.150) with a statistically significant $p \leq 0.05$, indicating a positive statistically significant correlation between them. The correlation coefficient between the blunted feelings dimension and QoL was 0.347 ($p \leq 0.01$), indicating a statistically significant positive correlation between them.

Table 3: Pearson's correlation coefficients between psychological Burnout and QoL.

Variables	Burnout total scale	Emotional Burnout	Blunted feelings	Lack of sense of accomplishment
The overall QoL scale	.184*	.150*	.347**	-0.092
General health quality	.294**	.249**	.324**	0.059
Quality of family and social life	-.282**	-.200**	-0.036	-.373**
Quality of emotions and emotional life	0.097	-0.032	.189*	0.097
Mental health quality	.301**	.319**	.252**	0.049

* Statistically significant at the level of (0.05)
** Statistically significant at the level of (0.01)

In contrast, the correlation coefficient between the dimension of lack of sense of accomplishment and QoL was -0.092, with a statistical significance of p≤0.01. It also appears from the previous table that there is a statistically significant correlation between the scores of the study sample members on the dimensions of the QoL scale and their scores on the burnout scale, as the correlation coefficients between them ranged between 0.282 and 0.301 with a statistical significance of p≤0.01. This indicates a positive statistically significant correlation, except for the relationship between the dimension of the quality of emotions and emotional life and the burnout scale at 0.097, with a statistically significant p≤0.01.

Differences by gender
A t-test was used for two independent samples to identify differences between the average burnout scores of the sample according to gender.

Table 4: T-test results according to gender.

Variable	Gender	N	Mean	SD	T-test	df	Sig.
Emotional Burnout	M	34	29.24	4.207	1.935	49.11	0.059
	F	138	27.69	4.043			
Blunted feelings	M	34	15.12	2.567	0.329	170	0.743
	F	138	14.93	2.980			
Lack of sense of accomplishment	M	34	17.09	3.467	1.041	170	0.299
	F	138	16.49	2.908			
Burnout total scale	M	34	61.44	8.236	1.681	170	0.095
	F	138	59.11	6.991			

Table 4 shows the statistically significant differences (p≤0.05) between the average responses of the sample members regarding social burnout according to gender. The differences favoured males, with an average of 29.24, where t=1.935, degree of freedom (df)=49.11 and p=.059. In contrast, there were no statistically significant differences (p>0.05) between the average responses of the participants regarding 'blunted feelings' according to gender (t=0.329, df=170, p=.743). Also, there were no statistically significant differences at level p>0.05 between the average responses of the participants in the lack of sense of achievement according to gender (t=1.041, df=170, p=.299). Regarding the total scale score, no significant differences were observed (p>0.05) between the average responses of the study participants regarding psychological burnout according to gender (t=1.681, df=170, p=.095).

Differences according to marital status
To identify differences between the sample members' average scores for psychological burnout according to marital status, a t-test was used for the two independent samples (**Table 5**).

Table 5: T-test results according to marital status.

Variable	Marital status	N	Mean	SD	T-test	df	Sig.
Emotional Burnout	Married	106	28.01	3.771	0.061	170	0.951
	Unmarried	66	27.97	4.634			
Blunted feelings	Married	106	14.98	2.901	0.058	135.65	0.954
	Unmarried	66	14.95	2.911			
Lack of sense of accomplishment	Married	106	17.06	2.953	2.508	170	0.013
	Unmarried	66	15.88	3.021			
Burnout total scale	Married	106	60.05	7.198	1.089	170	0.278
	Unmarried	66	58.80	7.420			

No statistically significant differences were observed (p>0.05) between the average responses of the sample members regarding emotional burnout according to marital status (t=0.061, df=170, p=.951). Regarding the second dimension, there were no statistically significant differences (p>0.01) between the average responses of the sample members regarding blunted feelings according to marital status (t=0.058, df=170, p=.954). Concerning the third dimension, the average responses of the study participants regarding the lack of sense of accomplishment according to marital status were statistically significant for sleeplessness (p≤0.01). The differences favoured married people with an average of 17.06, where t=2.508, df=135.65 and p=.013). As for the total scale score, there were no statistically significant

differences at level p>0.05 between the average responses of the sample members in psychological burnout according to marital status (t=1.089, df=170, p=.278).

Differences according to age
Table 6 shows the descriptive statistics of the average responses on the burnout scale according to age, with the highest average being 59.67 for those in the 31–40 years age group. By contrast, the lowest average was 14.84 for those in the age group below 31–40 years in the second dimension (blunted feelings). One-way ANOVA was used to identify differences between participants' average burnout scores according to their age.

Table 6: The statistical description of Age in the Burnout Scale.

Variable	Age (in years)	Sample	Mean	SD
Emotional Burnout	20-30	70	28.20	4.176
	31-40	81	27.79	4.119
	41-50	21	28.10	4.011
	Total	**172**	**27.99**	**4.110**
Blunted feelings	20-30	70	15.06	2.858
	31-40	81	14.84	3.064
	41-50	21	15.19	2.421
	Total	**172**	**14.97**	**2.897**
Lack of sense of accomplishment	20-30	70	16.27	3.130
	31-40	81	17.04	2.804
	41-50	21	16.05	3.398
	Total	**172**	**16.60**	**3.025**
Burnout total scale	20-30	70	59.53	6.743
	31-40	81	59.67	7.683
	41-50	21	59.33	7.812
	Total	**172**	**59.57**	**7.288**

Table 7 shows that for the first dimension, there are no statistically significant differences at p>.05 between the averages of the sample members in emotional burnout according to age (p=.825, f=.0192, F 2:171= 0). For the second dimension, there were no statistically significant differences at p>0.05 between the averages of the sample members in the blunted feelings according to age (p = .841 173. F 2:171 = 0). Regarding the third dimension, it

is clear that there are no statistically significant differences (p>0.05) between the averages of the sample members in the lack of sense of achievement category according to age (p =.201 619. F 2:171 =1). This was related to the total score on the scale. Thus, there were no statistically significant differences (p>0.05) between the averages of the sample members in psychological burnout according to age (p = .981 019. F 2:171 = 0).

Table 7: ANOVA according to age.

Variable	Sum of squares	df	Average difference between squares	Value F	Level of sig. p
Emotional Burnout	6.55	2	3.28	0.192	0.825
	2882.44	169	17.06		
	2888.99	171			
Blunted feelings	2.93	2	1.47	0.173	0.841
	1431.92	169	8.47		
	1434.85	171			
Lack of sense of accomplishment	29.43	2	14.72	1.619	0.201
	1535.68	169	9.09		
	1565.12	171			
Burnout total scale	**2.05**	**2**	**1.03**	**0.019**	**0.981**
	9080.11	**169**	**53.73**		

Differences according to the hospital variable
The descriptive statistics of the average responses on the burnout scale according to the hospital variable, where the highest average was 61.69 for workers in King Salman Hospital. The total burnout scale was 59.57 (**Table 8**).

Table 8: The statistical description of the hospital variable.

Variable	Hospital	N	Mean	SD
Emotional Burnout	King Abdullah University Hospital	54	**28.69**	3.776
	King Salman Hospital	36	28.31	3.861
	Alyamamah Hospital	82	27.40	4.380
	Total	**172**	**27.99**	**4.110**
Blunted feelings	King Abdullah University Hospital	54	14.76	3.144
	King Salman Hospital	36	**15.94**	2.495
	Alyamamah Hospital	82	14.68	2.832
	Total	**172**	**14.97**	**2.897**
Lack of sense of accomplishment	King Abdullah University Hospital	54	16.59	3.305
	King Salman Hospital	36	**17.44**	2.311
	Alyamamah Hospital	82	16.24	3.069
	Total	**172**	**16.60**	**3.025**
Burnout total scale	King Abdullah University Hospital	54	60.04	7.415
	King Salman Hospital	36	**61.69**	6.173
	Alyamamah Hospital	82	58.33	7.482
	Total	**172**	**59.57**	**7.288**

The lowest average was 14.68 for workers in other hospitals in the second dimension (blunted feelings). A One-way ANOVA test was used to identify the differences between the participants' average burnout scores according to hospital variables. It appears from **Table 9**, concerning the first dimension, that there are no statistically significant differences (p>0.05) between the averages of the sample members in emotional burnout according to the hospital variable (p = .180 731. F" 2:171" = 1). Regarding the second dimension, again, there were no statistically significant differences (p>0.05) between the averages of the sample members in blunted feelings according to the hospital variable (p = .075 632. F "2:171" = 2). Concerning the third dimension, the result remained the same with no statistically significant differences (p>0.05) between the averages of the sample members in lack of sense of accomplishment according to the hospital variable (p = .139 993. F "2:171" =1). Finally, regarding the total score of the scale, it became clear that there were no statistically significant differences (p>0.05) between the averages of the sample members in psychological burnout according to the hospital variable (p= .068. F "2:171" = 2).

Table 9: ANOVA according to the hospital variable.

Variable	Sum of squares	df	Average difference between squares	Value F	Level of sig. p
Emotional Burnout	57.99	2	28.99	1.731	0.180
	2831.01	169	16.75		
	2888.99	171			
Blunted feelings	43.34	2	21.67	2.632	0.075
	1391.52	169	8.23		
	1434.85	171			
Lack of sense of accomplishment	36.07	2	18.03	1.993	0.139
	1529.05	169	9.05		
	1565.12	171			
Burnout total scale	300.49	2	150.24	2.891	0.068
	8781.67	169	51.96		
	9082.16	171			

Differences according to years of experience
Table 10 shows the descriptive statistics of the average responses on the burnout scale according to years of experience. Those with less than five years of experience had the highest average (62.31). On the other hand, the lowest average was 13.89 for 15 years or more of experience in the second dimension (blunted feelings).

Table 10: The statistical description of years of experience.

Variable	Years of experience	N	Mean	SD
Emotional Burnout	Less than five years	32	28.88	3.230
	From 5 to less than ten years	73	28.41	4.499
	From 10 to less than 15 years	48	27.25	3.965
	Above 15 years	19	26.79	3.924
	Total	**172**	**27.99**	**4.110**
Blunted feelings	Less than five years	32	16.28	2.159
	From 5 to less than ten years	73	15.32	2.723
	From 10 to less than 15 years	48	14.00	3.074
	Above 15 years	19	13.89	3.178
	Total	**172**	**14.97**	**2.897**
Lack of sense of accomplishment	Less than five years	32	17.16	3.283
	From 5 to less than ten years	73	16.64	2.508
	From 10 to less than 15 years	48	16.69	3.321
	Above 15 years	19	15.32	3.481
	Total	**172**	**16.60**	**3.025**
Burnout total scale	Less than five years	32	62.31	5.083
	From 5 to less than ten years	73	60.37	7.074
	From 10 to less than 15 years	48	57.94	7.802
	Above 15 years	19	56.00	8.028
	Total	**172**	**59.57**	**7.288**

Differences between the sample members' average scores in terms of psychological burnout according to years of experience were identified using one-way ANOVA. **Table 11** shows that, in the first dimension, there were no statistically significant differences (p>0.05) between the averages of the sample members in emotional burnout according to years of experience (p =0.143 835. F "3:171"=1). Concerning the second dimension, there were statistically significant differences (p<0.01) between the averages of the sample members in blunted feelings according to years of experience (p = .001 619. F "3:171"=5). Concerning the third dimension, there were no statistically significant differences (p>0.05) between the averages of the sample in the lack of sense of achievement according to years of experience (p = .207 534. F "3:171" = 1). As for the total score of the scale, it is clear that there were statistically significant differences (p<0.01) between the averages of the sample members in psychological burnout according to years of experience (p = .005 370. F "3:171" = 4).

Table 11: ANOVA according to years of experience.

Years of experience	Mean	< 5	5-10	10-15	15 and above
Less than five years	16.28	-			
From 5 to less than ten years	15.32	0.966	-		
From 10 to less than 15 years	14.00	2.281*	1.315	-	
15 years and above	13.89	2.387*	1.420	0.105	-
Less than five years	62.31	-			
From 5 to less than ten years	60.37	1.943	-		
From 10 to less than 15 years	57.94	4.375*	2.432	-	
15 years and above	56.00	6.313*	4.370	1.938	-

Owing to the presence of statistically significant differences (p=0.05) between the mean scores of the sample members on the burnout scale according to years of experience, Tukey's HSD post hoc test was conducted for multiple dimensional comparisons to verify the direction of the differences **(Table 12).** The direction of differences in the second dimension, blunted feelings, was between those with <5 years of experience, 10-15 years of experience, and ≥15 years. It was in favour of those with <5 years of experience, with an average score of 16.28. Concerning the direction of differences in the total burnout scale, the differences were between those with <5, 10–15, and ≥15 years of experience and those with < 5 years of experience, with an average of 62.31.

Table 12: The direction of differences according to years of experience.

Variable	Sum of squares	df	Average difference between squares	Value F	Level of sig. p
Emotional Burnout	91.67	3	30.56	1.835	0.143
	2797.33	168	16.65		
	2888.99	171			

Blunted feelings	130.84	3	43.61	5.619	0.001
	1304.01	168	7.76		
	1434.85	171			
Lack of sense of accomplishment	41.74	3	13.91	1.534	0.207
	1523.38	168	9.07		
	1565.12	171			
Burnout total scale	657.46	3	219.15	4.370	0.005
	8424.70	168	50.15		
	9082.16	171			

Differences according to the shift time variable
Table 13 shows the descriptive statistics of the average responses on the burnout scale according to the shift time variable, where the highest average (64.62) was observed among night shifts in the total scale score. On the other hand, the lowest average was seen in the morning shift and was 14.50 in the second dimension (blunted feelings).

Table 13: The statistical description of shift time variable.

Variable	Shift time	N	Mean	SD
Emotional Burnout	Morning	74	27.54	3.728
	Evening	69	27.51	4.157
	Night	29	30.31	4.277
	Total	**172**	**27.99**	**4.110**
Blunted feelings	Morning	74	14.50	3.003
	Evening	69	14.77	2.718
	Night	29	16.66	2.482
	Total	**172**	**14.97**	**2.897**
Lack of sense of accomplishment	Morning	74	15.96	3.151
	Evening	69	16.86	2.942
	Night	29	17.66	2.567
	Total	**172**	**16.60**	**3.025**
Burnout total scale	Morning	74	58.00	7.511
	Evening	69	59.13	6.905
	Night	29	64.62	5.301
	Total	**172**	**59.57**	**7.288**

Table 14 also shows the first dimension, a statistically significant difference ($p<0.01$) between the averages of the sample members in emotional burnout according to shift time, where (p=.003 854. F "2:171" = 5). Concerning the second dimension, it is clear that there are statistically significant differences ($p<0.01$) between the averages of the sample members in the 'blunted feelings' according to shift time (p = .002 433. F "2:171" = 6). Concerning the third dimension, it is clear that there are statistically significant differences ($p<0.05$) between the averages of the sample members in the lack of sense of achievement according to shift time (p = .025 787. F "2:171" =3), relating to the total score of the scale. It becomes clear that there were statistically significant differences ($p<0.01$) between the averages of the sample members in psychological burnout according to shift time (p = .000 703. F "2:171" =9).

Table 14: ANOVA according to shift time.

Variable	Shift time	Mean	Morning	Evening	Night
Emotional Burnout	Morning	27.54	-		
	Evening	27.51	0.033	-	
	Night	30.31	2.770*	2.803*	-
Blunted feelings	Morning	14.50	-		
	Evening	14.77	0.268	-	
	Night	16.66	2.155*	1.887*	-
Lack of sense of accomplishment	Morning	15.96	-	-	
	Evening	16.86	-0.896		
	Night	17.66	1.696*	0.800	-
Burnout total scale	Morning	58.00	-		
	Evening	59.13	1.130	-	
	Night	64.62	6.621-*	5.490*	-

Owing to the presence of statistically significant differences (p<0.05) between the average scores of the sample members on the burnout scale according to shift time, Tukey's HSD post-test was conducted for multiple dimensional comparisons to verify the direction of the differences (**Table 15**). Statistically significant differences were observed between morning and night shifts (p<0.05). Emotional burnout was more significant in night shifts, with an average of 30.31. Concerning the direction of differences in the second dimension (blunted feelings), the differences were between those with shift time ('morning and evening') and night shift time in favour of night shift time (16.66). Concerning the direction of differences in the third dimension (lack of sense of accomplishment), the differences were between those with morning and night shift times in favour of night shift time, with an average of 17.66. The direction of differences in the total degree of psychological burnout, the differences were between those with shift time morning and evening and night shift time in favour of night shift time, with an average score of 64.62.

Table 15: The direction of differences according to the shift time variable.

Variable	Sum of squares	df	The average difference between squares	Value F	Level of sig. p
Emotional Burnout	187.16	2	93.58	5.854	0.003
	2701.83	169	15.99		
	2888.99	171			
Blunted feelings	101.51	2	50.76	6.433	0.002
	1333.34	169	7.89		
	1434.85	171			
Lack of sense of accomplishment	67.14	2	33.57	3.787	0.025
	1497.98	169	8.86		
	1565.12	171			
Burnout total scale	**935.51**	**2**	**467.75**	**9.703**	**0.000**
	8146.65	**169**	**48.21**		
	9082.16	**171**			

DISCUSSION

This study examined the prevalence of burnout among nurses working in three hospitals in Saudi Arabia and its relationship with QoL and demographic factors. The study found that the burnout level among nurses was medium yet highly prevalent.[15, 16, 19, 25] One study found that burnout is why nurses leave or consider leaving their jobs.[26] This study found that burnout was positively correlated with lower QoL, consistent with a previous study that found a correlation between burnout and sleep disorders.[18] Other studies have found that nurses' burnout affects their QoL.[15, 19,27] Enhancing the work environment and engagement among healthcare workers is recommended to reduce burnout and improve QoL.[22]

Regarding demographic factors, although some previous studies found that female nurses suffered more burnout[28], the current study found no relationship between gender and burnout level. This finding is consistent with a previous study that found that gender did not significantly contribute to burnout prediction among nurses.[29] The findings also showed that married nurses had a lower sense of accomplishment than single nurses did. A previous study found that being married was a predictive factor of compassion fatigue.[16] Previous studies have found that younger nurses experience higher levels of burnout in previous studies.[27, 28, 30, 31] However, this study found no significant relationship between age and burnout, which is consistent with a previous study that found that age does not significantly contribute to the prediction of burnout among nurses.[29] The findings of this study revealed that the number of years of experience affected the level of burnout; those with fewer years of experience reported higher burnout levels. This is consistent with a previous study that found that younger people with fewer years of work experience felt inadequate nursing care and experienced higher levels of stress and burnout.[32] Another study reported that the amount of education or training in emotional coping mechanisms is essential for coping with painful events.[33] Future studies should explore this issue in Saudi hospitals.

This study revealed that shift time affects the levels of burnout among nurses, with those working at night reporting higher levels of burnout. One study found that sleep deprivation during night shifts was related to decreased dorsolateral prefrontal cortex reactivity. After the night shift, the nurses showed a decrease in prefrontal cortex activity and cognitive performance.[34] The same study found that Intensive Care Unit (ICU) nurses showed a significant decrease in average verbal fluency test scores and, in general, a significant increase in anxiety scores.[34] Another study found that night shift nurses had higher levels of compassion fatigue and burnout.[16, 22, 35] Regarding the work setting, the study found no relationship between the hospital and burnout level among nurses, explaining that these hospitals have no fundamental differences in the setting or population served. Thus, this study recommends significant interventions to reduce burnout, including suitable nurse staffing, limiting the number of hours worked per shift, and improving the workplace environment.

Notably, international studies have revealed that there is still a gap since therapies for burnout usually take place after nurses have already experienced burnout. Education and supportive workplace environments have been identified as barriers against burnout. Hospital administrators in Saudi hospitals must develop a supportive work environment for nursing staff, considering that many are non-nationals who might struggle with cultural incompetency. Previous research have recommended teaching resilience and emotional coping mechanisms. Promoting resilience learning can help nurses recognise their negative thoughts and emotions and deal with traumatic content.[21] International research have shown that a younger age predicts less adaptive functioning.[24] This study found that younger nurses with less than five years of experience had higher burnout. We recommend designing national orientational programs for newly hired nurses that focus on developing coping strategies; peer support, self-reliance, problem negotiation, and self-care are critical positive coping strategies.

Limitations
This study had several limitations. First, it was a cross-sectional design. A longitudinal investigation is required to confirm the cause-and-effect link between the factors analysed. Second, the completion of the questionnaires may have been influenced by social desirability bias. Third, the sample had a sizable percentage of women, which is typical of nursing. Despite these drawbacks, this study used a large and diverse sample that could provide crucial information on the sociodemographic and occupational factors affecting nursing professionals' QoL.

CONCLUSION
This study found that moderate burnout was prevalent among nurses in Saudi Arabia. Marital status, work experience, and work shifts also affect burnout. Burnout was positively associated with lower QoL. This calls for more attention to be paid to reduce this phenomenon. Education that encourages resilience and emotional coping techniques can aid nurse retention, alleviate workplace pressures, and improve the QoL of nursing workers, thereby improving patient safety and satisfaction.

REFERENCES
1. Maslach, C., schaufeli WB, leiter MP. Job burnout. annu Rev Psychol, 2001; 52: 397-422.
2. Gómez-Urquiza, J.L., et al., Prevalence of Burnout Syndrome in Emergency Nurses: A Meta-Analysis. Crit Care Nurse, 2017; 37(5): e1-e9.
3. Kabunga, A. and P. Okalo, Prevalence and predictors of burnout among nurses during COVID-19: a cross-sectional study in hospitals in central Uganda. BMJ Open, 2021; 11(9): e054284.
4. Setyowati, R., K., & Putra, Prevalence of burnout syndrome among nurses in general hospitals in provincial East Java: Cross-sectional study. Enfermeria Clinica, 2019; 29: 362-366.
5. Shah, M.K., et al., Prevalence of and Factors Associated With Nurse Burnout in the US. JAMA Netw Open, 2021; 4(2): e2036469.
6. Woo, T., et al., Global prevalence of burnout symptoms among nurses: A systematic review and meta-analysis. J Psychiatr Res, 2020; 123: 9-20.
7. Qedair, J.T., et al., Prevalence and factors associated with burnout among nurses in Jeddah: a single-institution cross-sectional study. BMC Nurs, 2022; 21(1): 287.
8. Shbeer, A. and M. Ageel, Assessment of Occupational Burnout among Intensive Care Unit Staff in Jazan, Saudi Arabia, Using the Maslach Burnout Inventory. Crit Care Res Pract, 2022; 2022: 1298887.
9. Alyaemni, A., Measurement of experienced burnout among health care professionals in saudi hospitals a cross sectional study in riyadh. Adv Prev Med Health Care, 2019; 2(2).
10. Jennings, B.M., Work stress and burnout among nurses: Role of the work environment and working conditions. Patient safety and quality: An evidence-based handbook for nurses, 2008.
11. Maslach, C. and S.E. Jackson, A Social Psychological Analysis. Social Psychology of Health and Illness, 1982; 227.
12. Brennan, E.J., Towards resilience and wellbeing in nurses. British journal of nursing, 2017; 26(1): 43-47.
13. Brborović, H., et al., Antecedents and associations of sickness presenteeism and sickness absenteeism in nurses: A systematic review. International Journal of Nursing Practice, 2017; 23(6): e12598.
14. Kelly, L.A., P.M. Gee, and R.J. Butler, Impact of nurse burnout on organizational and position turnover. Nursing outlook, 2021; 69(1): 96-102.
15. Khatatbeh, H., et al., Nurses' burnout and quality of life: A systematic review and critical analysis of measures used. Nursing Open, 2022; 9(3): 1564-1574.
16. Ruiz-Fernández, M.D., E. Pérez-García, and Á.M. Ortega-Galán, Quality of life in nursing professionals: Burnout, fatigue, and compassion satisfaction. International Journal of Environmental Research and Public Health, 2020; 17(4): 1253.
17. Awajeh, A.M., et al., Burnout among critical care nurses in king Saud medical city (KSMC). J Nurs Care, 2018; 7(2): 1-5.
18. Naz, S., A.M. Hashmi, and A. Asif, Burnout and quality of life in nurses of a tertiary care hospital in Pakistan. J Pak Med Assoc, 2016; 66(5): 532-536.
19. Alabi, M.A., et al., Burnout and quality of life among nurses working in selected mental health institutions in South West Nigeria. African Health Sciences, 2021; 21(3): 1428-1439.
20. Owczarek, K., The concept of quality of life. Acta Neuropsychologica, 2010; 8(3): 207-213.

21. Olaleye, T.T., T.M. Christianson, and T.J. Hoot, Nurse burnout and resiliency in critical care nurses: A scoping review. International Journal of Africa Nursing Sciences, 2022; 17: 100461.

22. García-Iglesias, J.J., et al., Predictive factors for burnout and work engagement levels among doctors and nurses: a systematic review. Revista Española de Salud Pública, 2021; 95: e202104046-e202104046.

23. Flanders, S., et al., Effectiveness of a staff resilience program in a pediatric intensive care unit. Journal of pediatric nursing, 2020; 50: 1-4.

24. Finstad, G.L., et al., Resilience, coping strategies and posttraumatic growth in the workplace following COVID-19: A narrative review on the positive aspects of trauma. International Journal of Environmental Research and Public Health, 2021; 18(18): 9453.

25. Phillips, K., M. Knowlton, and J. Riseden, Emergency department nursing burnout and resilience. Advanced Emergency Nursing Journal, 2022; 44(1): 54-62.

26. Shah, M.K., et al., Prevalence of and factors associated with nurse burnout in the US. JAMA network open, 2021; 4(2): e2036469-e2036469.

27. Khatatbeh, H., et al., Paediatric nurses' burnout and perceived health: The moderating effect of the common work-shift. Nursing Open, 2022; 9(3): 1679-1687.

28. Storm, J. and H.C. Chen, The relationships among alarm fatigue, compassion fatigue, burnout and compassion satisfaction in critical care and step-down nurses. Journal of Clinical Nursing, 2021; 30(3-4): 443-453.

29. Ezenwaji, I.O., et al., Work-related stress, burnout, and related sociodemographic factors among nurses: Implications for administrators, research, and policy. Medicine, 2019; 98(3).

30. Galanis, P., et al., Nurses' burnout and associated risk factors during the COVID-19 pandemic: A systematic review and meta-analysis. Journal of advanced nursing, 2021; 77(8): 3286-3302.

31. Wang, J., et al., Factors associated with compassion satisfaction, burnout, and secondary traumatic stress among Chinese nurses in tertiary hospitals: A cross-sectional study. International Journal of Nursing Studies, 2020; 102: 103472.

32. Murat, M., S. Köse, and S. Savaşer, Determination of stress, depression and burnout levels of front-line nurses during the COVID-19 pandemic. International journal of mental health nursing, 2021; 30(2): 533-543.

33. Roney, L.N. and M.C. Acri, The cost of caring: An exploration of compassion fatigue, compassion satisfaction, and job satisfaction in pediatric nurses. Journal of pediatric nursing, 2018; 40: 74-80.

34. Durán-Gómez, N., et al., Night shift and decreased brain activity of ICU nurses: a near-infrared spectroscopy study. International Journal of Environmental Research and Public Health, 2021; 18(22): 11930.

35. Khatatbeh, H., et al., Burnout, quality of life and perceived patient adverse events among paediatric nurses during the COVID-19 pandemic. Journal of Clinical Nursing, 2023; 32(13-14): 3874-3886.