Research Article

OCCUPATIONAL STRESS, COPING STRATEGIES, AND QUALITY OF LIFE AMONG NURSES IN ABHA CITY

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Abstract

Background: The nursing profession is inherently stressful, and nurses in Abha City face unique challenges due to rapid population growth and evolving healthcare needs.

Objective: The purpose of the present study is to identify the correlation between "Occupational stress, coping strategies and quality of life" among nurses in Abha city.

Method: The present study utilized a cross-sectional, descriptive survey, and correlational research design. A convenience sampling throughout an online questionnaire was used to recruit 411 nurses from three hospitals in Abha city, and data was collected using three validated instruments: The Expanded Nursing Stress Scale, the Brief Cope Scale, and the World Health Organization-Quality of Life Scale. SPSS version 26 was used for data analysis, including descriptive statistics, independent samples t-test, ANOVA, and Pearson's correlation coefficient.

Results: Findings revealed a moderate level of occupational stress (mean score 2.31 ± 0.56 on the ENSS-59 scale), with the main sources being dealing with patients and their families (2.35 ± 0.65), uncertainty concerning treatment (2.33 ± 0.66), and discrimination (2.32 ± 0.88). Nurses employed coping strategies such as planning (2.49 ± 0.75), religion (2.47 ± 0.72), and substance use (2.45 ± 0.77), while the least adopted strategies were self-blame (2.40 ± 0.71), self-distraction (2.37 ± 0.73), and behavioral disengagement (2.32 ± 0.73). Significant associations were found between sources of occupational stress and coping strategies, such as death and dying stress source correlating with self-distraction ($r=0.202$), use of instrumental support ($r=0.111$), positive reframing ($r=0.154$), humor ($r=0.111$), religion

(r=0.142), and self-blame (r=0.141). Conflict with peers as a stress source was significantly correlated with self-distraction (r=0.157), denial (r=0.158), substance use (r=0.183), use of instrumental support (r=0.130), behavioral disengagement (r=0.106), venting (r=0.121), humor (r=0.203), religion (r=0.106), and self-blame (r=0.152). A significantly negative association between occupational stress and quality of life was also identified (r=-0.451).

Conclusion: Significant correlation were found between sources of occupational stress and coping strategies. The study also demonstrated a significant negative association between occupational stress and quality of life, emphasizing the need for interventions to reduce occupational stress and enhance nurses' well-being. ASEAN Journal of Psychiatry, Vol. 25 (2) February, 2024; 1-14.

Keywords: Occupational Stress; Coping Strategies; Quality of Life; Depression; Correlational Design; Saudi Arabia

Introduction

Occupational stress is a significant public health concern that affects millions of workers worldwide, including nurses who are at the forefront of patient care [1]. Nurses play a crucial role in the healthcare system, and their job demands can be highly stressful, leading to various physical, mental, and emotional health challenges [2].

Nursing is a demanding profession that requires professionals to manage multiple tasks, work long hours, and deal with life-and-death situations daily [3]. These work-related stressors have been linked to a variety of negative outcomes, such as burnout, job dissatisfaction, and attrition, which ultimately affect the quality of care provided to patients [4]. In addition, nurses often struggle to maintain a healthy work-life balance, which can further exacerbate their stress levels [5].

The concept of occupational stress is closely related to the Job Demands-Resources model (JD-R), which posits that work-related stress arises from an imbalance between job demands and available resources [2]. In the context of nursing, job demands may include high workload, time pressure, and emotional demands, while resources may encompass social support, autonomy, and opportunities for professional development [6]. Research has shown that when job demands exceed available resources, nurses are more likely to experience stress, burnout, and reduced well-being [2].

Coping strategies are the methods individuals employ to deal with stress and adversity [7]. In the context of nursing, coping strategies can be classified into problem-focused and emotion-focused approaches [8]. Problem-focused coping involves actions taken to tackle the source of stress, such as seeking information or developing new skills, while emotion-focused coping focuses on managing emotional reactions to stressors, such as seeking social support or engaging in relaxation techniques. Understanding the coping strategies nurses use to manage stress is essential for developing interventions that promote better mental health and job satisfaction.

Quality of Life (QoL) is a multidimensional concept that encompasses an individual's physical, psychological, social, and environmental well-being [9]. In the nursing profession, occupational stress can significantly impact nurses' quality of life, leading to diminished personal and professional satisfaction [10]. Previous research has demonstrated that higher levels of stress and burnout among nurses are associated with reduced QoL [11]. Therefore, it is essential to identify the factors that contribute to nurses' quality of life to implement targeted interventions that support their well-being.

The healthcare sector in Abha City, like many other cities, is experiencing increased demands for nursing services, fueled by factors such as an aging population, growing prevalence of chronic diseases, and advances in medical technology [12]. This mounting pressure has raised concerns about the well-being of the nursing workforce in Abha City and the sustainability of the healthcare system [13].

Moreover, the cultural, social, and organizational factors in Abha City may influence the experience of occupational stress and coping strategies among nurses [14]. For example, cultural norms

and expectations related to gender roles, family responsibilities, and professional hierarchies may shape nurses' perceptions of stress and their preferred coping mechanisms [15]. Additionally, organizational factors such as staffing levels, leadership styles, and institutional support systems can impact the level of occupational stress and the quality of life experienced by nurses in Abha City [13].

Despite the growing awareness of the challenges faced by nurses, there remains a paucity of research on "Occupational stress, coping strategies, and quality of life" among nurses in Abha City specifically. This thesis seeks to address this knowledge gap by exploring the prevalence and correlates of occupational stress, the coping strategies employed by nurses, and the relationship between "Occupational stress, coping strategies, and quality of life" in this setting.

The findings of this thesis have important implications for healthcare organizations, nursing educators, and policymakers in Abha City and beyond. By identifying the factors that contribute to occupational stress and the coping strategies that are most effective in managing this stress, interventions can be developed to support nurses' mental and physical well-being, which may ultimately lead to improved patient care [16].

Furthermore, understanding the relationship between "Occupational stress, coping strategies, and quality of life" can inform the development of policies and practices that promote a healthier work environment for nurses. This includes interventions such as adequate staffing levels, flexible work schedules, and access to mental health support services [6].

Additionally, the findings of this thesis may contribute to the growing body of literature on occupational stress in nursing, expanding our understanding of the complex interplay between individual, cultural, and organizational factors that shape nurses' experiences of stress and coping [14].

In conclusion, this thesis aims to explore the critical issue of "occupational stress, coping strategies, and quality of life" among nurses in Abha City. By addressing this important topic, the research seeks to contribute to the development of evidence-based interventions and policies that support the well-being of nurses and ultimately enhance the quality of patient care in the healthcare system. The findings of this study can serve as a valuable resource for healthcare organizations, nursing educators, and policymakers in Abha City and beyond, helping them to create a more supportive and resilient nursing workforce that is better equipped to handle the challenges of the modern healthcare environment [17].

Methodology

Study design

The current study uses a cross-sectional, descriptive survey, and correlational research design. In the context of this study, a cross-sectional design offers a valuable approach to examine the relationships between occupational stress, coping strategies, and quality of life among nurses in Abha City, allowing for the identification of trends and patterns that may inform future interventions and policies aimed at improving nurses' well-being.

Setting

ing of the study includes three hospitals in the Abha region of Saudi Arabia: Aseer Central Hospital (ACH), Mental Health Hospital in Abha, and Khamis Mushayt General Hospital (KMGH). These hospitals were chosen due to their diversity in terms of the types of services they provide and the patient populations they serve.

The choice of these three hospitals provides a diverse sample of healthcare professionals and patient populations, which allows for a more comprehensive understanding of the relationship between "occupational stress, coping strategies, and quality of life" among nurses in Abha City.

Target population and inclusion criteria

The population of the present study comprised all nurses working the previously reported settings. Based on the statistics retrieved from the hospitals' administration, the total number of the nursing staff in the three settings were 1951 nurses. However, the inclusion criteria for the study are nurses who are currently employed at any of these hospitals, have been working at their current position for at least six months, and are able to read and write in English or Arabic. Nurses not meeting these inclusion criteria were excluded from the study.

Sampling design and sample size

The sample size was calculated using Raosoft

sample size calculator. A margin of error of 5%, a confidence interval of 95%, and a population size of 1800 nurses were taken into consideration. Thus, a minimum sample of 317 nurses were required. However, a sample of 411 nurses were recruited in this study.

The sampling strategy for this study was a convenience sampling approach, with participants recruited from each hospital based on their willingness to participate and ability to meet the inclusion criteria. The sample size was determined based on the number of participants who meet the inclusion criteria and agree to participate in the study, with a total of 411 participants that were enrolled in this study.

Data collection instruments

To collect data, the study adopted the following data collection instruments:

The Expanded Nursing Stress (ENSS) Scale: The Expanded Nursing Stress Scale (ENSS) is an updated and expanded version of the Nursing Stress Scale (NSS), which was originally developed by Gray-Toft and Anderson. The NSS is a widely-used instrument designed to measure occupational stress among nurses, focusing on the sources of stress that are specific to nursing practice. The ENSS builds upon the original scale, incorporating additional items and dimensions to provide a more comprehensive assessment of nursing-related stressors [18]. By using the ENSS in research, it is possible to better understand the various sources of stress experienced by nurses, identify potential areas for intervention, and explore the relationship between occupational stress and other variables, such as coping strategies and quality of life [19].

The first subscale focuses on physical sources of stress, such as "work overload and computer breakdown". The second subscale deals with psychological sources of stress, including "death, inadequate preparation, pain and suffering, lack of support, and mistakes". The third subscale relates to "social sources of stress, including uncertainty due to conflicts with doctors and other nurses, lack of knowledge, and conflict with a supervisor".

The 59 items are arranged in a 5-point Likert response scale. The responses are:

• Never stressful

• Occasionally stressful

• Frequently stressful

• Extremely stressful

The ENSS was found to have higher reliability compared to the original NSS, with a Cronbach's alpha value of 0.96 vs 0.89. The reliability of individual subscales ranged from 0.88 for problems with supervisors to 0.65 for discrimination

The Brief Cope (BC) Scale: The Brief Cope (BC) was created by Charles S. Carver in 1997 as a tool to evaluate people's coping abilities during stressful times. It consists of 28 questions that are divided into 14 subscales, and responses are scored on a 4-point scale ranging from 1 (I haven't been doing this at all) to 4 (I have been doing this a lot) [20]. Cronbach's alpha was used to measure the reliability of the subscales, which ranged from 0.51 (use of emotional support) to 0.81 (religion). Other subscale reliability values were "self-distraction (0.77), active coping (0.63), denial (0.64), substance use (0.79), use of instrumental support (0.68), behavioral disengagement (0.74), venting (0.74), positive reframing (0.75), planning (0.75), humor (0.75), acceptance (0.77), and self-blame (0.61)".

The World Health Organization-Quality of Life Scale (WHO-QOL): The World Health Organization-Quality of Life Scale (WHO-QOL) is a questionnaire that assesses an individual's subjective perception of their quality of life. It was developed by the World Health Organization (WHO) and is widely used in research and clinical settings around the world.

In this study, we utilized the World Health Organization Quality of Life Scale (WHOQOL-BREF) to assess the quality of life among nurses. The WHOQOL-BREF is a shorter version of the original WHOQOL-100 questionnaire and has been widely used in research and clinical settings around the world [21]. It consists of 26 items that assess an individual's subjective perception of their quality of life across four main dimensions: Physical health, psychological health, social relationships, and environmental health [22]. The scoring system for the WHOQOL-BREF is based on a 5-point Likert scale, with higher scores indicating better quality of life in each domain [23]. The questionnaire is designed to be self-administered, allowing individuals to express their own perceptions of their quality of life.

The World Health Organization Quality of Life

Scale (WHOQOL-BREF) assesses an individual's subjective perception of their quality of life across four main domains: Physical health, psychological health, social relationships, and environmental health [21,22]

Physical health: The physical health domain focuses on an individual's physical well-being, including aspects such as energy levels, mobility, pain, and the ability to carry out daily activities [21]. It encompasses factors such as physical fitness, functional capacity, and the presence of any physical ailments or limitations.

Psychological health: The psychological health domain explores an individual's emotional well-being, cognitive functioning, self-esteem, and satisfaction with their mental state [22]. It encompasses aspects such as positive emotions, negative emotions, self-confidence, resilience, and the ability to cope with stressors [21].

Social relationships: The social relationships domain examines an individual's satisfaction with their interpersonal relationships, social support networks, and sense of belonging [22]. It considers factors such as social support, social inclusion, and the quality of relationships with family, friends, and the broader community [21].

Environmental health: The environmental health domain focuses on an individual's satisfaction with their physical environment, including living conditions, access to healthcare services, and the broader social and cultural context [22]. It encompasses factors such as physical safety, healthcare accessibility, environmental pollution, and living standards [21].

Data collection procedure

The study received ethical approval from the IBR committees in Ministry of Health and Dr. Soliman Fakeeh College for Medical Sciences. Informed consent was obtained from the participants, and the purpose and methods of the study were clearly explained to them. They were assured that their participation was voluntary and that they could withdraw at any time without any negative consequences. The participants were also informed that there would be no financial or other benefits associated with their participation. The author distributed and collected the questionnaire from the participants who volunteered to participate in the study, either through paper or electronic means. Participants were recruited from various

departments, units, and wards in the study settings.

Data analysis

The "Statistical Package for Social Sciences" (SPSS) version 26 was used for data analysis. Means and frequencies were used to describe the study sample and the responses to the items on the study scale. In addition, "independent samples t-test and one-way Analysis of Variance (ANOVA)" were used to identify any significant statistical differences in the nurses' responses and levels of "occupational stress, coping strategies and quality of life" due to their demographic characteristics. Moreover, the Pearson's correlation coefficient was used to identify the association between "occupational stress, coping strategies" and quality of life among the enrolled nurses.

Results

Baseline characteristics of the enrolled nurses

The results presented in Table 1 show the baseline socio-demographic characteristics of the enrolled nurses. The results indicated that mean age of the enrolled nurses was (31.3 ± 4.7). Male nurses constituted 60.1% (n=247), whereas females were representing 39.9% (n=164) of the total sample participants. In addition, it was found that 19.2% (n=79) of the enrolled nurses had less than 5 years of experience, whereas 41.4% (n=170) had 5 to 10 years of experience and 39.4% (n=162) had more than 10 years of experience. With regard to the enrolled nurses' educational qualifications, it was found that 24.8% (n=102) had diploma degree, 57.7% (n=237) had bachelor degree, and 17.5% (n=72) had master or PhD degree. Finally, it was found that 36.5% (n=150) of the enrolled nurses were single, 52.1% (n=214) were married, and 11.4% (n=47) were either divorced or widowed.

Table 1. Baseline characteristics of the enrolled nurses (n=411).

Variable	F	%
Age (M ± SD)	31.3	4.7
Gender		
Male	247	60.1
Female	164	39.9

Years of experience		
Less than 5 years	79	19.2
5-10 years	170	41.4
More than 10 years	162	39.4
Educational qualification		
Diploma	102	24.8
Bachelor	237	57.7
Master or PhD	72	17.5
Marital status		
Single	150	36.5
Married	214	52.1
Divorced/Widowed	47	11.4

Level of occupational stress among nurses in Abha city

The results presented in Table 2 show the mean scores and standard deviations of the enrolled nurses' responses to the ENSS-59 scale. A mean score was used to evaluate the degree of the stressors. Based on the scoring of the ENSS-59, a mean score between 0 and 1.33 was considered low, a mean score between 1.34 and 2.67 was considered moderate and a mean score higher than 2.67 was considered high. The results showed that the highest source of occupational stress was dealing with patients and their families (2.35 ± 0.65), followed by Uncertainty Concerning Treatment (2.33 ± 0.66), discrimination (2.32 ± 0.88), and in the fourth rank was death and dying (2.31 ± 0.78). In addition, in the fifth rank was workload (2.30 ± 0.71), followed by supervisors (2.30 ± 0.71) and conflict with peers in the seventh rank (2.29 ± 0.71). However, all sources were moderately rated as sources of occupational stress as perceived by the enrolled nurses. Finally, the lowest two sources of occupational stress were conflict with physicians (2.28 ± 0.73) in the eighth rank and inadequate emotional preparation in the ninth rank (2.27 ± 0.83).

Table 2. Sources of occupational stress as perceived by the nurses (n=411).

Domain	M ± SD	Rank	Rating
Death and dying	2.31 ± 0.78	4	Moderate
Conflict with peers	2.29 ± 0.71	7	Moderate
Discrimination	2.32 ± 0.88	3	Moderate
Inadequate emotional preparation	2.27 ± 0.83	9	Moderate
Conflict with physicians	2.28 ± 0.73	8	Moderate
Supervisors	2.30 ± 0.71	6	Moderate
Uncertainty concerning treatment	2.33 ± 0.66	2	Moderate
Dealing with patients and their families	2.35 ± 0.65	1	Moderate
Workload	2.31 ± 0.66	5	Moderate
Total occupational stress	2.31 ± 0.56		Moderate

Overall, the enrolled nurses reported moderate level of occupational stress from the surveyed sources as the mean score of the total ENSS scale was (2.31 ± 0.56).

The stress coping strategies among nurses in Abha city

The results presented in Table 3 show the enrolled nurses' responses to the BRIEF COPE scale used in this study. The results showed that the most adopted stress coping strategies by the enrolled nurses were planning (2.49 ± 0.75), followed by religion (2.47 ± 0.72), substance use (2.45 ± 0.77) and acceptance (2.45 ± 0.74). However, the least adopted coping strategies were self-blame (2.40 ± 0.71), self-distraction (2.37 ± 0.73), Behavioral disengagement (2.32 ± 0.73), and humor (2.25 ± 0.75).

Table 3. Stress coping strategies adopted by the nurses (n=411).

No.	Coping strategy	M ± SD	Rank
Positive coping strategies			
1	Active coping	2.44 ± 0.71	5
2	"Use of emotional support"	2.43 ± 0.69	7
3	"Use of instrumental support"	2.41 ± 0.71	10
4	Positive reframing	2.43 ± 0.73	6
5	Venting	2.43 ± 0.76	8
6	Planning	2.49 ± 0.75	1
7	Humor	2.25 ± 0.75	14
8	Acceptance	2.45 ± 0.74	4
9	Religion	2.47 ± 0.72	2
Negative coping strategies			
10	Self-distraction	2.37 ± 0.73	12
11	Denial	2.42 ± 0.72	9
12	Substance use	2.45 ± 0.77	3
13	Behavioral disengagement	2.32 ± 0.73	13
14	Self-blame	2.40 ± 0.71	11

The level of the quality of life among nurses in Abha city

The results presented in Table 4 show the enrolled nurses responses to the WHOQOL-BREF questionnaire measuring the level of quality of life on different domains. The results showed that the highest level of quality of life was in the psychological health dimension (21.15 ± 3.04), followed by the environmental health dimension (20.40 ± 2.21), and in the third rank was the physical health domain (16.24 ± 2.29) and finally the social relationships dimension (9.13 ± 1.55). Overall, the enrolled nurses had a moderate level of quality of life (67.15 ± 2.55).

Table 4. Level of quality of life as reported by the nurses (n=411).

No.	Domain	Range of score	M ± SD	Rank
1	Social relationships dimension	4-20	9.13 ± 1.55	4
2	Physical health dimension	8-40	16.24 ± 2.29	3
3	Psychological health dimension	6-30	21.15 ± 3.04	1
4	Environmental health dimension	8-40	20.40 ± 2.21	2
5	Total	26-130	67.15 ± 2.55	Moderate

The association between "occupational stress, coping strategies and quality of life" among nurses in Abha city

The results presented in Table 5 show the association between the occupational stress domains and the stress coping strategies adopted by the recruited nurses. The results showed that death and dying stress source was significantly correlated with self-distraction (r=0.202), use of instrumental support (r=0.111), positive reframing (r=0.154), humor (r=0.111), religion (r=0.142) and self-blame (r=0.141). In addition, it was found that conflict with peers as a source of stress was significantly correlated with self-distraction (r=0.157), denial (r=0.158), substance use (r=0.183), use of instrumental support (r=0.130), behavioral disengagement (r=0.106), venting (r=0.121), humor (r=0.203), religion (r=0.106) and self-blame (r=0.152).

Table 5: Pearson's correlation coefficients between stress coping strategies and sources of occupational stress.

Coping strategy	Death and dying	Conflict with peers	Discrimination	Inadequate emotional preparation	Conflict with physicians	Supervisors	Uncertainty Concerning Treatment	Dealing with patients and their families	Workload
Self-distraction	0.202**	0.157**	0.144**	0.176**	0.176**	0.159**	0.221**	0.209**	0.216**
Active coping	0.07	0.041	0.08	0.029	0.016	0.09	0.052	0.049	0.134**
Denial	0.043	0.158**	0.088	0.128**	0.045	0.032	0.061	0.085	0.098*
Substance use	-0.07	0.183**	0.169**	0.093	0.04	0.009	0.024	0.018	0.067
Use of emotional support	0.086	0.049	0.024	0.027	0.135**	0.018	0.121*	0.106*	0.074
Use of instrumental support	0.111*	0.130**	0.110*	0.108*	0.165**	0.137**	0.152**	0.113*	0.175**
Behavioral disengagement	-0.013	0.106*	0.051	0.123*	0.084	0.072	0.079	0.114*	0.086
Venting	0.110*	0.121*	0.085	0.102*	0.09	0.094	0.174**	0.157**	0.173**
Positive reframing	0.154**	0.09	0.065	0.086	0.130**	0.133**	0.137**	0.142'*	0.107*
Planning	0.076	0.096	0.01	0.083	0.091	0.069	0.126*	0.098*	0.111*
Humor	0.111*	0.203**	0.147**	0.134**	0.145**	0.151**	0.155**	0.153**	0.221**
Acceptance	0.088	0.039	0.012	0.042	0.055	0.044	0.074	0.084	0.08
Religion	0.142**	0.106*	0.104*	0.106*	0.111*	0.150**	0.152**	0.160**	0.111**
Self-blame	0.141**	0.152**	0.168**	0.120*	0.137**	0.139**	0.217**	0.197**	0.173**

Note: **Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed).

Moreover, the results showed that discrimination as a source of stress was significantly associated with self-distraction (r=0.144), substance use (r=0.169), use of instrumental support (r=0.110), humor (r=0.147), religion (r=0.104), and self-blame (r=0.168). In addition, it was found that inadequate emotional preparation was significantly associated with self-distraction (r=0.176), denial (r=0.128), use of instrumental support (r=0.108), behavioral disengagement (r=0.123), venting (r=0.102), humor (r=0.134), religion (r=0.106), and self-blame (r=0.120). Further, it was found that conflict with physicians as a source of stress was significantly associated with self-distraction (r=0.176), use of emotional support (r=0.135), use of instrumental support (r=0.165), positive reframing (r=0.130), humor (r=0.145), religion (r=0.111), and self-blame (r=0.137). Also, the results showed that supervisors as a source of occupational stress was found to be significantly associated with self-distraction (r=0.159), use of instrumental support (r=0.137), positive reframing (r=0.133), humor (r=0.151), religion (r=0.150), and self-blame (r=0.139).

Furthermore, it was found that uncertainty concerning treatment as a source of stress is significantly associated with self-distraction (r=0.221), use of emotional support (r=0.121), use of instrumental support (r=0.152), venting (r=0.174), positive reframing (r=0.137), planning (r=0.126), humor (r=0.155), religion (r=0.152), self-blame (r=0.217). Moreover, the results showed that dealing with patients and their families as a source of occupational stress was found to

be significantly associated with self-distraction (r=0.209), use of emotional support (r=0.106), use of instrumental support (r=0.113), behavioral disengagement (r=0.114), venting (r=0.157), positive reframing (r=0.142), planning (r=0.098), humor (r=0.153), religion (r=0.160), self-blame (r=0.197). Finally, it was found that workload as a source of stress is significantly associated with self-distraction (r=0.216), active coping (r=0.134), denial (r=0.098), use of instrumental support (r=0.175), venting (r=0.173), positive reframing (r=0.107) planning (r=0.111), humor (r=0.221), religion (r=0.111) and self-blame (r=0.173).

The association between "pearson's correlation coefficients between quality of life and sources of occupational stress" among nurses in abha city

The results presented in Table 6 show the relationship between the occupational stress domains and the quality of life scale domains based on the responses of the nurses. The results showed that quality of social relations domain was negatively associated with death and dying (r=-0.421), conflict with peers (r=-0.534), discrimination (r=-0.211), inadequate emotional preparation (r=-0.258), uncertainty concerning treatment (r=-0.018), and workload (r=-0.088). In addition, it was found that physical health quality was negatively associated with death and dying (r=-0.064), conflict with peers (r=-0.268), discrimination (r=-0.342), conflict with physicians (r=-0.351), supervisors (r=-0.027), dealing with patients and their families (r=-0.260).

Table 6: Pearson's correlation coefficients between quality of life and sources of occupational stress.

Domain	Social relations	Physical health	Psychological health	Environmental health	Total
Death and dying	-0.421**	-0.064**	-0.364**	-0.128**	
Conflict with Peers	-0.534**	-0.268**	-0.210**	-0.143**	
Discrimination	-0.211*	-0.342*	-0.108*	-0.033**	
Inadequate emotional preparation	-0.258*	-0.147	-0.173	-0.119	
Conflict with physicians	-0.271	-0.351*	-0.413*	-0.104	
Supervisors	-0.017	-0.027**	-0.140*	-0.078	
Uncertainty concerning treatment	-0.018*	-0.155	-0.139	-0.248	
Dealing with patients and their families	-0.373	-0.260*	-0.237	-0.146**	
Workload	-0.088**	-0.473	-0.259**	-0.299	
Total					R=-0.451

Note: **Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed).

The results showed that the psychological health quality was negatively associated with death and dying (r=-0.364), conflict with peers (r=-0.210), discrimination (r=-0.108), conflict with physicians (r=-0.413), supervisors (r=-0.140), workload (r=0.259). Furthermore, it was found that the environmental health domain was negatively associated with death and dying (r=-0.128), conflict with peers (r=-0.143), discrimination (r=-0.033), and dealing with patients and their families (r=-0.146). Overall, it was found that there is a significantly negative association between "occupational stress and quality of life" among the enrolled nurses (r=-0.451).

Discussion

The presented results provide an overview of the baseline socio-demographic characteristics of the enrolled nurses. The mean age of the enrolled nurses was 31.3 ± 4.7, with male nurses representing the majority (60.1%) of the sample. This finding is consistent with previous studies that have shown a higher representation of male nurses in some countries and regions (e.g., Asia and the Middle East) compared to others (e.g., Europe and North America) [24]. The higher representation of male nurses in this study could be due to cultural and social factors specific to the region or country where the study was conducted.

The results also showed that a considerable proportion of the enrolled nurses (39.4%) had more than 10 years of experience, indicating that the sample included a significant number of experienced nurses. This finding is in line with previous studies that have reported an increase in the number of experienced nurses in the workforce due to the aging population and the retirement of older nurses [25,26]. It is also noteworthy that 57.7% of the enrolled nurses had a bachelor's degree, which is consistent with the increasing trend towards higher educational qualifications for nurses.

Moreover, the study found that 36.5% of the enrolled nurses were single, which is similar to the results of previous studies. However, the proportion of married nurses (52.1%) was slightly higher than in previous studies, which could reflect changes in societal norms and values related to marriage and family [27].

Our findings revealed that the highest source of occupational stress as perceived by the enrolled nurses was dealing with patients and their families (2.35 ± 0.65), followed closely by uncertainty concerning treatment (2.33 ± 0.66), discrimination (2.32 ± 0.88), and death and dying (2.31 ± 0.78). "These findings are consistent with previous studies that have identified dealing with patients and their families as a significant source of occupational stress for nurses" [28,29]. The high score for uncertainty concerning treatment highlights the challenges and pressures that nurses face in providing safe and effective care to their patients. Similarly, discrimination can have a detrimental impact on nurses' mental and physical health and job satisfaction, which can ultimately affect the quality of care provided to patients.

Moreover, the results of the present study indicated that workload (2.30 ± 0.71), supervisors (2.30 ± 0.71), and conflict with peers (2.29 ± 0.71) were also rated as moderately significant sources of occupational stress. Moreover, the results of the present study indicated that workload (2.30 ± 0.71), supervisors (2.30 ± 0.71), and conflict with peers (2.29 ± 0.71) were also rated as moderately significant sources of occupational stress. These findings are consistent with previous psychiatric studies that have highlighted the negative impact of heavy workloads, poor relationships with supervisors, and conflicts with colleagues on nurses' well-being and job satisfaction [1,30,31].

Studies have consistently shown that high workload and job demands contribute to increased stress levels among nurses, leading to burnout and decreased job satisfaction [1,31]. Poor relationships with supervisors have been associated with increased psychological distress and lower job satisfaction among nurses [30]. Conflict with peers has also been identified as a significant stressor, negatively affecting job satisfaction and increasing psychological distress [32,33].

It is worth noting that conflict with physicians (2.28 ± 0.73) and inadequate emotional preparation (2.27 ± 0.83) were rated as the lowest sources of occupational stress by the enrolled nurses. These findings suggest that conflict with physicians is less common in this setting, which could reflect positive working relationships between nurses and physicians. Additionally, the low rating for inadequate emotional preparation indicates that enrolled nurses in this study feel adequately prepared to manage the emotional demands of their job [34].

The BRIEF COPE scale was used to evaluate the coping strategies adopted by the nurses. The results showed that the most commonly adopted coping strategy was planning (2.49 ± 0.75), followed by religion (2.47 ± 0.72), substance use (2.45 ± 0.77), and acceptance (2.45 ± 0.74). These findings suggest that the enrolled nurses were more likely to use "active and problem-focused coping strategies, such as planning and acceptance, as well as emotion-focused coping strategies, such as religion and substance use, to manage occupational stress". On the other hand, the least adopted coping strategies were self-blame (2.40 ± 0.71), self-distraction (2.37 ± 0.73), behavioral disengagement (2.32 ± 0.73), and humor (2.25 ± 0.75). These results suggest that the enrolled nurses were less likely to use avoidant coping strategies, such as self-blame, self-distraction, and behavioral disengagement, to deal with occupational stress. This may indicate that the enrolled nurses preferred to face stressors directly and to find practical solutions to deal with them rather than avoiding them. Overall, the findings of this study are consistent with previous studies that have used the BRIEF COPE scale to evaluate coping strategies adopted by nurses. For instance, a study conducted in Turkey found that nurses mostly used active and emotion-focused coping strategies, such as planning and positive reframing, to cope with work-related stressors [35]. Another study conducted in Saudi Arabia found that nurses used problem-focused coping strategies, such as seeking social support and problem-solving, to manage job stress [36]. However, it is important to note that cultural differences may affect the coping strategies adopted by nurses in different countries. Therefore, future studies should consider exploring the cultural factors that influence coping strategies adopted by nurses to manage occupational stress.

The results of the present study revealed that the enrolled nurses' highest quality of life was in the psychological health domain, with a mean score of 21.15 ± 3.04. This implies that the enrolled nurses have a positive outlook on their life and are satisfied with their mental well-being. The second-highest quality of life was found in the environmental health domain, with a mean score of 20.40 ± 2.21, indicating that the enrolled nurses were satisfied with their physical environment, which includes factors such as safety, access to healthcare facilities, and transportation. On the other hand, the enrolled nurses' lowest quality of life was found in the social relationships domain, with a mean score of 9.13 ± 1.55, indicating that the enrolled nurses were not satisfied with their social interactions and relationships. This finding highlights the need for interventions to improve social support and relationships for the enrolled nurses, which can positively impact their overall well-being. The third-highest quality of life was found in the physical health domain, with a mean score of 16.24 ± 2.29, which implies that the enrolled nurses were satisfied with their physical health status. Overall, the enrolled nurses had a moderate level of quality of life, with a mean score of 67.15 ± 2.55, indicating that there is room for improvement in some areas of their life. These findings are consistent with previous studies that have reported similar results on the quality of life of nurses, suggesting that nurses' well-being is an important area that needs attention to ensure their job satisfaction and retention in the nursing profession [37,38].

Our findings showed that different sources of occupational stress were significantly associated with different coping strategies adopted by the enrolled nurses. Self-distraction was found to be significantly associated with all sources of stress. Furthermore, the use of instrumental support, positive reframing, humor, religion, and self-blame coping strategies were significantly associated with multiple sources of stress. This suggests that these coping strategies may be more generalized and used in response to a variety of stressors. On the other hand, denial, substance use, behavioral disengagement, venting, and use of emotional support coping strategies were each significantly associated with one or two sources of stress. This suggests that these coping strategies may be more specific to certain stressors. These findings have important implications for interventions aimed at reducing occupational stress and promoting effective coping strategies among enrolled nurses. Specifically, interventions may need to be tailored to address specific sources of stress and the corresponding coping strategies used by nurses in response to those stressors. For example, interventions aimed at reducing stress related to workload may need to focus on promoting planning and active coping strategies, while interventions aimed at reducing stress related to discrimination may need to focus on promoting alternative coping strategies to self-distraction and substance use.

The findings of the study suggest that there is a significant negative association between occupational stress and quality of life among

enrolled nurses. The negative association between occupational stress and quality of life was found to be strongest in the social relations and psychological health domains. Specifically, quality of social relations was negatively associated with death and dying, conflict with peers, discrimination, inadequate emotional preparation, uncertainty concerning treatment, and workload. Physical health quality was negatively associated with death and dying, conflict with peers, discrimination, conflict with physicians, supervisors, and dealing with patients and their families. Psychological health quality was negatively associated with death and dying, conflict with peers, discrimination, conflict with physicians, supervisors, and workload. Finally, the environmental health domain was negatively associated with death and dying, conflict with peers, discrimination, and dealing with patients and their families. These findings are consistent with previous research that has linked occupational stress among healthcare workers, including nurses, to decreased quality of life. In particular, studies have shown that work-related stress can lead to burnout, fatigue, and negative physical and mental health outcomes [39-41]. Additionally, previous studies have found that occupational stress can negatively impact social relationships and job satisfaction, which are important components of quality of life. Therefore, the present study adds to the growing body of literature on the negative effects of occupational stress on the quality of life of healthcare workers, and underscores the importance of addressing work-related stress in the healthcare industry.

Conclusion

In conclusion, the study identified dealing with patients and their families, uncertainty concerning treatment, and discrimination as the highest sources of occupational stress for the nurses. Workload, supervisors, and conflict with peers were also significant sources of stress. Conflict with physicians and inadequate emotional preparation were rated as the lowest sources of stress. The enrolled nurses mainly used active and problem-focused coping strategies to manage occupational stress, such as planning, religion, and acceptance, and avoided coping strategies such as self-blame, self-distraction, and behavioral disengagement. The enrolled nurses' highest quality of life was in the psychological health domain, followed by the environmental health domain, while the lowest was in the social and relationship health domain.

Overall, the study's findings were consistent with previous studies, and the results suggest that cultural and social factors specific to the region or country where the study was conducted may affect nurses' stress levels and coping strategies.

Ethical considerations

Official approvals to conduct this study were obtained from the institutional review board of Fakeeh College for Medical Sciences (FCMS) (Approval No. 436/IRB/2023). In addition, the participants were assured that all the collected data were kept confidential, and anonymous.

References

1. Aiken LH, Clarke SP, Sloane DM, Lake ET, Cheney T. Effects of hospital care environment on patient mortality and nurse outcomes. JONA: The journal of nursing administration. 2009;39(7/8):S45-51.

2. Bakker AB, Demerouti E. Job demands resources theory: Taking stock and looking forward. J Occup Health Psychol. 2017;22(3):273.

3. Hayes LJ, O'Brien-Pallas L, Duffield C, Shamian J, Buchan J, et al. Nurse turnover: A literature review. International journal of nursing studies. 2006;43(2):237-63.

4. Leiter MP, Maslach C. Nurse turnover: The mediating role of burnout. Journal of nursing management. 2009;17(3):331-9.

5. Hämmig O. Health and well-being at work: The key role of supervisor support. SSM-population health. 2017;3:393-402.

6. Aiken LH, Sloane DM, Bruyneel L, Van den Heede K, Griffiths P, et al. Nurse staffing and education and hospital mortality in nine European countries: A retrospective observational study. The lancet. 2014;383(9931):1824-30.

7. Gillespie BM, Chaboyer W, Wallis M. The influence of personal characteristics on the resilience of operating room nurses: A predictor study. International journal of nursing studies. 2009;46(7):968-76.

8. de Andrade KO, Carvalho AM, Figueiró-Filho EA, Pontes ER, Nucci GK, et al. Quality of general life in the medicine course students. International archives of medicine. 2017;10.

9. YY, Zhang C, Han XR, Li W, Wang YL. Determinants of compassion satisfaction, compassion fatigue and burn out in nursing: A correlative meta-analysis. Medicine. 2018;97(26).

10. Suleiman-Martos N, Albendín-García L, Gómez-Urquiza JL, Vargas-Román K, Ramirez-Baena L, et al. Prevalence and predictors of burnout in midwives: A systematic review and meta-analysis. International journal of environmental research and public health. 2020;17(2):641.

11. Labrague LJ, McEnroe-Petitte DM, Gloe D, Thomas L, Papathanasiou IV, et al. A literature review on stress and coping strategies in nursing students. Journal of mental health. 2017;26(5):471-80.

12. Alharbi S. Occupational stress, coping strategies, and quality of life among nurses in general and psychiatric setting in Jeddah City-KSA. Open Journal of Psychiatry. 2019;9(2):124-37.

13. Aldossary A, While A, Barriball L. Health care and nursing in Saudi Arabia. International nursing review. 2008;55(1):125-8.

14. Aljuaid M, Mannan F, Chaudhry Z, Rawaf S, Majeed A. Quality of care in university hospitals in Saudi Arabia: A systematic review. BMJ open. 2016;6(2).

15. Almalki MJ, FitzGerald G, Clark M. The relationship between quality of work life and turnover intention of primary health care nurses in Saudi Arabia. BMC health services research. 2012;12(1):1-1.

16. Garrosa E, Moreno-Jimenez B, Liang Y, Gonzalez JL. The relationship between socio-demographic variables, job stressors, burnout, and hardy personality in nurses: An exploratory study. International journal of nursing studies. 2008;45(3):418-27.

17. Czaja AS, Moss M, Mealer M. Symptoms of posttraumatic stress disorder among pediatric acute care nurses. Journal of pediatric nursing. 2012;27(4):357-65.

18. Tsegaw S, Getachew Y, Tegegne B. Determinants of work-related stress among nurses working in private and public hospitals in dessie city, 2021: Comparative cross-sectional study. Psychology research and behavior management. 2022,31:1823-35.

19. Porcel-Gálvez AM, Barrientos-Trigo S, Bermúdez-García S, Fernández-García E, Bueno-Ferrán M, et al. The nursing stress scale-spanish version: An update to its psychometric properties and validation of a short-form version in acute care hospital settings. International Journal of Environmental Research and Public Health. 2020;17(22):8456.

20. Alharbi J, Wilson R, Woods C, Usher K. The factors influencing burnout and job satisfaction among critical care nurses: a study of Saudi critical care nurses. Journal of nursing management. 2016;24(6):708-17.

21. Skevington SM, Lotfy M, O'Connell KA. The World Health Organization's WHOQOL-BREF quality of life assessment: psychometric properties and results of the international field trial. A report from the WHOQOL group. Quality of life Research. 2004;13:299-310.

22. Whoqol Group. Development of the World Health Organization WHOQOL-BREF quality of life assessment. Psychological medicine. 1998;28(3):551-8.

23. Wong FY, Yang L, Yuen JW, Chang KK, Wong FK. Assessing quality of life using WHOQOL-BREF: A cross-sectional study on the association between quality of life and neighborhood environmental satisfaction, and the mediating effect of health-related behaviors. BMC public health. 2018;18:1-4.

24. Sallam M. COVID-19 vaccine hesitancy worldwide: A concise systematic review of vaccine acceptance rates. Vaccines. 2021;9(2):160.

25. Duffield C, Graham E, Donoghue J, Griffiths R, Bichel-Findlay J, et al. Why older nurses leave the workforce and the implications of them staying. Journal of clinical nursing. 2015;24(5-6):824-31.

26. Buerhaus PI, Auerbach DI, Staiger DO, Muench U. Projections of the Long-Term Growth of the Registered Nurse Workforce. J Nurs Adm. 2015;45(10):S5-9.

27. Dejaeghere J, Arur AA. Education for all: How schooling is creating social changes for lowered-caste girls in rural India. Gender & Society. 2020;34(6):951-75.

28. Said RM, El-Shafei DA. Occupational stress, job satisfaction, and intent to leave: nurses working on front lines during COVID-19 pandemic in Zagazig City, Egypt. Environmental Science and Pollution Research. 2021;28:8791-801.

29. Lu DM, Sun N, Hong S, Fan YY, Kong FY, et al. Occupational stress and coping strategies among emergency department nurses of China. Archives of psychiatric nursing. 2015;29(4):208-12.

30. Ruggiero JS, Stueve D, Hansen PR, Sauls A et al. Leadership style and psychological well-being among nursing faculty: a descriptive correlational study. Professional Nursing. 2020: 36(4): 409-416.

31. Tourangeau AE, Doran DM, Hall LM, O'Brien Pallas L, Pringle D, et al. Impact of hospital nursing care on 30-day mortality for acute medical patients. Journal of advanced nursing. 2007;57(1):32-44.

32. Laschinger HK, Borgogni L, Consiglio C, Read E. The effects of authentic leadership, six areas of worklife, and occupational coping self-efficacy on new graduate nurses' burnout and mental health: A cross-sectional study. International journal of nursing studies. 2015;52(6):1080-9.

33. Adriaenssens J, De Gucht V, Maes S. The impact of traumatic events on emergency room nurses: Findings from a questionnaire survey. International journal of nursing studies. 2012;49(11):1411-22.

34. McCloughen A, Levy D, Johnson A, Nguyen H, McKenzie H. Nursing students' socialisation to emotion management during early clinical placement experiences: A qualitative study. Journal of Clinical Nursing. 2020;29(13-14):2508-20.

35. Arslan G, Yurttas A. The Relationship between Burnout and Coping Strategies in Nurses: The Role of Emotional Intelligence. J Psych Nurs, 2018: 9(1):1-8.

36. Al-Hashem A. Coping Strategies of Nurses Working in Intensive Care Units. Journal of Nursing Education and Practice. 2014;4(1):71-80.

37. Chung HC, Chen YC, Chang SC, Hsu WL, Hsieh TC. Nurses' well-being, health-promoting lifestyle and work environment satisfaction correlation: A psychometric study for development of nursing health and job satisfaction model and scale. International journal of environmental research and public health. 2020;17(10):3582.

38. Seitovirta J, Vehviläinen-Julkunen K, Mitronen L, De Gieter S, Kvist T. Attention to nurses' rewarding–an interview study of registered nurses working in primary and private healthcare in Finland. Journal of clinical nursing. 2017;26(7-8):1042-52.

39. Khamisa N, Oldenburg B, Peltzer K, Ilic D. Work related stress, burnout, job satisfaction and general health of nurses. International journal of environmental research and public health. 2015;12(1):652-66.

40. Papathanasiou IV. Work-related mental consequences: Implications of burnout on mental health status among health care providers. Acta Informatica Medica. 2015;23(1):22.

41. Van den Broeck A, De Cuyper N, De Witte H, Vansteenkiste M. Not all job demands are equal: Differentiating job hindrances and job challenges in the Job Demands-Resources model. European journal of work and organizational psychology. 2010;19(6):735-59.

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