Jordan Journal of Nursing Research,
DOI: https://doi.org/10.14525/JJNR.180

Jordan Journal of Nursing Research

https://jjnr.just.edu.jo/jjnr

Professional Quality of Life among Nurses in Private Hospitals in Saudi Arabia: A Multi-Center Cross-Sectional Study

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ARTICLE INFO

Article History:
Received: March 24, 2026
Accepted: June 6, 2026

ABSTRACT

Background: Nurses' professional quality of life is vital to the quality of care and workforce sustainability, but is often threatened by compassion fatigue. ***Purpose***: This study aimed to assess the professional quality of life among nurses working in private hospitals in Saudi Arabia and identify associated factors. ***Methods***: A cross-sectional study was conducted across eight hospitals between July and August 2023 using the Professional Quality of Life Scale to measure compassion satisfaction, burnout, and secondary traumatic stress. Descriptive statistics, Pearson correlation, and multivariable linear regression were used in data analysis. ***Results***: A total of 1,037 nurses participated in the study (response rate = 62%). Nurses reported moderate to high compassion satisfaction (M = 40.49, SD = 6.79), moderate burnout (M = 28.44, SD = 5.34), and low to moderate secondary traumatic stress (M = 24.22, SD = 7.47). Compassion satisfaction was negatively correlated with burnout (r = -0.498) and secondary traumatic stress (r = -0.226). Multivariable linear regression analysis identified scheduling flexibility as a significant positive predictor of compassion satisfaction (B = 0.722, p < 0.001). In contrast, overtime frequency, night shifts, and workload were associated with lower compassion satisfaction and higher burnout levels. ***Conclusion***: Although nurses demonstrated moderate to high compassion satisfaction, they reported moderate levels of burnout and secondary traumatic stress. This highlights the need for targeted organizational support to enhance their professional quality of life. ***Implications for Nursing*****:** Allocating resources and optimizing work conditions are essential to enhance nurses' professional quality of life. Healthcare organizations should continuously monitor nurse wellbeing and respond to address stressors.

Keywords: Burnout, Compassion fatigue, Compassion satisfaction, Nurse, Professional quality of life, Secondary traumatic stress.

What does this paper add?

1. Nurses in Saudi Arabia reported moderate to high levels of compassion satisfaction, yet also experienced moderate burnout and secondary

traumatic stress.
2. Scheduling flexibility, overtime burden, and workload demands were found to impact nurses' professional quality of life significantly.
3. The results align with broader regional and global research, reinforcing the need to improve nurses' professional quality of life.

Introduction

The healthcare system is inherently complex and dynamic, requiring continuous adaptation to evolving patient needs and healthcare transformation (Sturmberg & Bircher, 2019). In this context, nurses play a central role through their interactions with patients, families, healthcare professionals, and the system itself. Nurses provide patient-centered care that meets individual patient needs while simultaneously dealing with a wide range of challenges related to staffing, work conditions, resources, and other system-related obstacles that affect the delivery of healthcare (Kwame & Petrucka, 2021).

Globally, the nursing workforce continues to experience substantial occupational stress, burnout, and workforce shortages that threaten healthcare sustainability and quality of care (World Health Organization, 2020). Due to the nature of their job, nurses interact with patients with varying acuity levels as well as their families, which places their emotional and psychological well-being at considerable risk (Mottaghi et al., 2020). Such stressors indeed jeopardize the nurses' quality of life and potentially result in undesired attrition and turnover within the nursing profession (Kelly et al., 2021).

The Professional Quality of Life (ProQOL) concept refers to the perceived quality of life of a person in relation to his/her work, encompassing compassion satisfaction and compassion fatigue (Stamm, 2010). On the positive side, compassion satisfaction reflects the rewarding emotions and sense of fulfilment nurses derive from helping patients and performing their jobs (Sacco & Copel, 2018). At the same time, recurrent exposure to traumatized individuals and emotionally demanding situations generates negative feelings for nurses, described as compassion fatigue (Cavanagh et al., 2020). This can lead to a state of exhaustion that limits the ability of nurses to engage in caring relationships and may lead to burnout and secondary traumatic stress (Stamm, 2010). Burnout typically emerges as a cumulative long-term stress and dissatisfaction, leading to a state of frustration with the work environment and reduced sense of achievement over time (Cohen et al., 2023). In parallel, secondary traumatic stress arises when nurses experience emotional distress as a result of absorbing the feelings of despair from patients enduring stressful conditions (Rushforth et al., 2023). Maintaining a balance between compassion satisfaction and compassion fatigue is important to sustain nurses' well-being and work-life balance (Stamm, 2010).

To maintain this balance, nurse leaders need to understand how ProQOL affects not only the nurses, but also the patients and the entire organization. International evidence consistently reported that higher levels of compassion satisfaction among nurses are associated with stronger nurse-patient relationships, enhanced quality of nursing care, better nursing performance, positive work environment, and better organizational outcomes (Ali et al., 2022; Ryu & Shim, 2022; Sacco & Copel, 2018). Conversely, compassion fatigue is linked to negative physical and psychological consequences, such as headache, sleep deprivation, and depression, and may also undermine performance, increase absenteeism and turnover, and reduce patient satisfaction (Dall'Ora et al., 2020; Peters, 2018).

Nurses' ProQOL is commonly examined as an indicator of nurses' well-being, often assessed in terms of compassion fatigue, burnout, and secondary traumatic stress. Studies in various contexts have generally reported an average ProQOL of nurses (Adolfo, 2021; Ali et al., 2022; Hunsaker et al., 2015; Ndlovu et al., 2022). These studies have also identified multiple factors associated with ProQOL among nurses, including age, working hours and shifts, job satisfaction, quality of sleep, practice environment, and managerial support.

In Saudi Arabia, previous studies have reported average to high levels of ProQOL, particularly among individuals working in public hospitals and those with fewer years of experience (Ageel & Shbeer, 2022; Algamdi, 2022). Other studies found average levels of ProQOL associated with factors, such as the length of working shift, educational level, and nationality (Alharbi et al., 2020; Bahari et al., 2022). However, these studies were conducted in public hospitals, the working conditions and organizational structures of which differ structurally from those of private hospitals. Therefore, findings derived from public-sector settings

cannot be assumed to reflect conditions within private hospitals. Evidence on ProQOL among nurses in the Saudi private sector remains limited, restricting the ability of health leaders and policymakers to develop targeted, context-specific interventions. Hence, this study aimed to assess the ProQOL among nurses working in a large private healthcare system in Saudi Arabia and identify factors associated with compassion satisfaction, burnout, and secondary traumatic stress.

Methods

Design and Setting

This study employed a cross-sectional correlational research design to evaluate the professional quality of life of nurses in a large private healthcare system in Saudi Arabia from July to August 2023. The design was considered appropriate to examine the relationships among ProQOL dimensions within a large nursing population at a single point in time (Wang & Cheng, 2020), as it allows efficient data collection from geographically distributed hospitals. The healthcare system comprised eight private hospitals located across different regions of Saudi Arabia, including the central, western, eastern, and southern regions. The participating hospitals provide tertiary healthcare and vary in size, with bed capacities ranging from 30 to 276 beds. English was the official working language across the participating hospitals due to the multinational composition of the nursing workforce. Similar to the broader Saudi private healthcare sector, the nursing workforce primarily consisted of expatriate nurses from various cultural and professional backgrounds working alongside Saudi nurses. This study followed the Strengthening of Reporting of Observational Studies in Epidemiology (STROBE) guidelines.

Participants

This study employed a census sampling methodology to maximize participation and representation across hospitals and departments. The target population included nurses working in private hospitals in Saudi Arabia, while the accessible population comprised registered nurses employed within the participating healthcare system during the study period. Eligible participants were registered nurses with a minimum of six months of experience in a hospital setting. Nurses were excluded if they were on extended leave during the data collection period or if their roles were solely administrative with no direct patient care role. Within the participating hospitals, the total nursing workforce consisted of 2,108 nurses, of whom 1,673 met the eligibility criteria and were invited to participate. The sample size was estimated using the G*Power statistical software package, version 3.1.9.7. A sample size of 300 nurses was determined to be sufficient based on multiple linear regression analysis, considering an effect size of 0.2, a power of 80%, and a significance level of 0.05. The small effect size was selected as a conservative estimate, given the limited prior evidence on ProQOL in private-sector settings. It is important to note that the estimated sample size represents the minimum required threshold to achieve adequate statistical power, not a recruitment target. As the study employed a census sampling approach, whereby all eligible nurses were invited to participate, the final sample of 1,037 respondents exceeded this threshold, enhancing statistical power, estimate precision, and representativeness, which aligns with the inclusive nature of the design rather than introducing sampling bias (Wang & Cheng, 2020). The survey was designed to be optional, allowing nurses the choice to participate. A total of 1,037 nurses participated in the survey, yielding an overall response rate of 62%. Participation was not evenly distributed across hospitals, corresponding to variations in workforce size, with larger hospitals contributing a proportionally greater number of respondents.

Instruments

The English version of ProQOL-5 was utilized in this study, with permission granted by the Centre for Victims of Torture; the rightful owner of the instrument (The Centre for Victims of Torture, 2021). The ProQOL-5 comprises 30 items equally distributed among three subscales: compassion satisfaction, burnout, and secondary traumatic stress. Each item is rated on a 5-point Likert scale ranging from 1 (never) to 5 (very often). The total score for each subscale ranges from 10 to 50, with scores categorized as low (22 or less), moderate (23-41), and high (42 or more) according to Stamm (2010). ProQOL-5 has demonstrated acceptable psychometric properties among healthcare professionals. Stamm (2010) established content validity based on a comprehensive theoretical framework, and construct validity has been supported through confirmatory factor analyses across multiple

healthcare populations (Hunsaker et al., 2015). Regarding internal consistency reliability, Stamm (2010) reported Cronbach's alpha coefficient ranging from 0.81 to 0.88 across the three subscales. In this study, internal consistency was similarly strong, with Cronbach's alpha coefficients of 0.755, 0.914, 0.758, and 0.872 for the overall ProQOL, compassion satisfaction, burnout, and secondary traumatic stress subscales, respectively. In addition, participating nurses completed questions related to work conditions and sociodemographic characteristics, including age, gender, marital status, parental status, nationality, position, educational attainment, years of professional experience, and pursuit of advanced degrees.

Data Collection

The questionnaire was shared with eligible nurses electronically through the hospitals' email systems using the SurveyMonkey platform. The email included an invitation letter, a research information data sheet, and the survey link. The questionnaire explicitly stated that the nurses' completion of the questionnaire signifies their informed consent to participate in the study. The nurses were provided with information indicating that their involvement in the study was voluntary, and they had the option to participate or withdraw from the study at any point in time. Furthermore, the nurses were provided with the assurance that the survey guarantees anonymity, ensuring that their responses remain strictly confidential. Following the initial email, a subsequent reminder was dispatched two weeks thereafter with the intention of incentivizing nurses to actively participate in the survey. The average time for participants to finish the survey was 12 minutes.

Ethical Considerations

The research was conducted after obtaining ethical approval from the Institutional Review Board Committee at the Saudi German Hospitals (Ethical approval number: ECC# 2023-22). For confidentiality and data protection, the questionnaire was completed anonymously, with no personally identifiable information. Data was securely stored in a password-protected file accessible only to the research team and used solely for research purposes.

Data Analysis

Data analysis was assumed sequentially in alignment with the study objectives. First, descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to describe the demographic and work-related profiles of participants, to describe the scores of compassion satisfaction, burnout, and secondary traumatic stress subscales. Prior to inferential analyses, the normality assumption of metric variables was assessed using the Kolmogorov-Smirnov test, and the internal consistency reliability of the ProQOL-5 and its subscales was assessed using Cronbach's alpha coefficients. Pearson's test was used to assess the correlation among ProQOL subscales, and the multivariable linear regression analysis, using the Enter method, was applied to identify factors associated with each ProQOL dimension. In the regression, the analysis was applied separately for each subscale as the dependent variable, model assumptions were evaluated, model fit was assessed using R^2 and adjusted R^2 statistics, and multicollinearity among independent variables was evaluated using variance inflation factor (VIF) values, whereby all VIF values were below 2.5, indicating no evidence of problematic multicollinearity. Statistical significance was set at $p < 0.05$ for all analyses.

Prior to analysis, the collected data was screened for completeness. A few questionnaires contained minor missing responses, which were handled using pairwise exclusion; no questionnaires had missing data in key study variables that required full exclusion. All analyses were conducted using IBM SPSS Statistics, version 28.0.

Results

A total of 1,037 nurses completed the questionnaire, representing a 62% response rate. Participation varied across hospitals in proportion to workforce size. The majority of the participants were direct patient care nurses (94.3%), held a baccalaureate degree (69.0%), and had 1-2 years of experience in their current hospital (32.8%). The participants were predominantly female (84.5%), married (62.3%), 26-30 years old (37.0%), and working 12-hour shifts (63.5%). The sample represented multiple nationalities, primarily Indians (40.7%). Notably, approximately a half of the nurses had children (52.2%), although only 26.7% co-resided with them [see Table 1].

Table 1. Demographic and work-related characteristics of the included nurses (N = 1,037)

Characteristics	*n*	*%*
Sex		
Male	161	15.5
Female	876	84.5
Age group		
20 - 25 years	84	8.1
26 - 30 years	384	37.0
31 - 35 years	309	29.8
36 - 40 years	180	17.4
41 - 45 years	41	4.0
46 - 50 years	27	2.6
51 - 55 years	12	1.2
Marital status		
Married	646	62.3
Single	363	35.0
Divorced	25	2.4
Widowed	3	0.3
Level of education		
Diploma	261	25.2
Baccalaureate	716	69.0
Master	58	5.6
Ph.D.	2	0.2
Nationality		
Indian	422	40.7
Filipino	178	17.2
Egyptian	177	17.1
Sudanese	64	6.1
Jordanian	54	5.2
Lebanese	51	4.9
Saudi	36	3.5
Tunisian	16	1.5
Other	39	3.8
Years of experience in the hospital		
6 months to < 1 year	175	16.9
1 to < 2 years	340	32.8
2 to < 5 years	306	29.5
5 to < 10 years	145	14.0
10 to < 15 years	46	4.4
15 to < 20 years	14	1.4
> 20 years	11	1.1
Nursing role/position		
Direct care nurses	978	94.3
Nurse leaders (Chief Nursing Officers, leaders, managers, supervisors)	50	4.8
Other roles (nursing educators, nursing quality managers)	9	0.9
Working unit		
Critical Care Units (adult and pediatric)	334	32.2
Outpatient Department	161	15.5
Medical/Surgical (mixed)	104	10.0
Operation Room	103	9.9
Emergency Room	74	7.1
Pediatrics	70	6.8
Procedural areas	57	5.5
Obstetrics and Gynecology	53	5.1
Medical	33	3.2
Surgical	26	2.5
Other	22	2.2

Length of work shift		
Twelve Hours shift	659	63.5
Eight hours shift	322	31.1
Mixed/variable work hours	56	5.4
Predominantly worked shift		
Mixed day and night duty	576	55.5
Day duty	245	23.7
Straight duty	77	7.4
Split duty	77	7.4
Night duty	62	6.0
Working split duty		
Yes	253	24.4
No	730	70.4
Not applicable	54	5.2
Having children		
Yes	542	52.2
No	452	43.6
Not applicable	43	4.2
Living with children		
Yes	274	26.7
No	660	64.3
Not applicable	103	9.9
Pursuing higher academic degrees		
Yes	267	25.7
No	770	74.3

The analysis indicated moderate to high levels of compassion satisfaction (M = 40.49, SD = 6.79), moderate levels of burnout (M = 28.44, SD = 5.34), and low to moderate levels of secondary traumatic stress (M = 24.22, SD = 7.47). The highest compassion satisfaction item reflected their motivation to work as nurses (M = 4.25, SD = 0.92), whereas the lowest agreement pertained to feeling energized after providing patient care (M = 3.68, SD = 0.98). In terms of burnout, the highest agreement concerned being very caring individuals (M = 4.26, SD = 0.78), while the lowest agreement pertained to feeling trapped in their nursing roles (M = 2.39, SD = 1.18). For secondary traumatic stress, nurses largely agreed that they are preoccupied with more than one patient under their care (M = 3.35, SD = 1.02), whereas the lowest agreement concerned difficulty recalling important aspects of their work with trauma patients (M = 2.11, SD = 1.05) [see Table 2].

Table 2. Descriptive analysis of nurses' perceptions of their ProQOL (N = 1,037)

Questionnaire Items †	***M***	***SD***
Subscale 1: Compassion Satisfaction (CS)	**40.49**	**6.79**
I like my work as a nurse.	4.25	0.92
I am proud of what I can do to provide care.	4.24	0.82
I have thoughts that I am a "success" as a nurse.	4.22	0.83
I have happy thoughts and feelings about those I provide care for and how I could help them.	4.09	0.87
I am happy that I chose to do this work.	4.09	0.91
I get satisfaction from being able to provide care for people.	4.07	0.89
I believe I can make a difference through my work.	4.01	0.90
I am pleased with how I am able to keep up with providing care techniques and protocols.	4.00	0.86
My work makes me feel satisfied.	3.83	1.02
I feel invigorated after working with those I provide care for.	3.68	0.98
Subscale 2: Burnout (BO)	**28.44**	**5.34**
I am a very caring person.	4.26	0.78
I feel connected to others.	3.81	0.90

Questionnaire Items †	***M***	***SD***
I am the person I always wanted to be.	3.76	0.91
I am happy.	3.70	1.03
I have beliefs that sustain me	3.60	0.93
I feel overwhelmed because my workload seems endless.	2.94	1.06
I feel worn out because of my work as a nurse.	2.91	1.14
I feel bogged down by the system.	2.84	1.07
I am not as productive at work because I am losing sleep over traumatic experiences of a person I provide care for.	2.41	1.17
I feel trapped by my job as a nurse.	2.39	1.18
Subscale 3: Secondary Traumatic Stress (STS)	**24.22**	**7.47**
I am preoccupied with more than one person I provide care for.	3.35	1.02
Because of my work, I have felt on edge about various things.	2.53	1.12
I jump or am startled by unexpected sounds.	2.47	1.09
I find it difficult to separate my personal life from my life as a nurse.	2.40	1.16
I think that I might have been affected by the traumatic stress of those I provide care for.	2.35	1.07
I feel as though I am experiencing the trauma of someone I have provided care for.	2.30	1.10
I feel depressed because of the traumatic experiences of the people I provide care for.	2.25	1.10
I avoid certain activities or situations because they remind me of frightening experiences of the people I provide care for.	2.25	1.09
As a result of my work, I have intrusive, frightening thoughts.	2.21	1.13
I can't recall important parts of my work with trauma victims.	2.11	1.05
Additional items related to nurses' perceptions of work-related factors		
I work overtime.	3.42	0.99
I can take breaks during my working shifts.	2.87	0.98
There is flexibility in scheduling in my unit.	3.22	1.06
There is flexibility in taking leave or vacation time.	3.04	1.06
I believe that the level of work demand is high in my unit.	3.75	1.00

† Possible score: 1-5 points.

The analysis of nurses' perceptions regarding work-related conditions revealed moderate to high levels of agreement in self-reported overtime frequency (M = 3.42, SD = 0.99), scheduling flexibility (M = 3.22, SD = 1.06), and high work demands (M = 3.75, SD = 1.00). Additionally, there was moderate agreement regarding perceived flexibility in taking leave or vacation time (M = 3.04, SD = 1.06).

Pearson correlation analysis indicated a significant negative correlation between compassion satisfaction and both burnout (r = -0.498, p <0.01) and secondary traumatic stress (r = -0.226, p <0.01), while a positive significant correlation was observed between burnout and secondary traumatic stress (r =0.567, p <0.01).

An Enter multiple linear regression analysis was performed to identify factors associated with compassion satisfaction, burnout, and secondary traumatic stress. The compassion satisfaction model was statistically significant, $F(14, 1022) = 43.56$, p <0.001, $R^2 = 0.374$, adjusted $R^2 = 0.365$. Compassion satisfaction demonstrated a positive significant association with scheduling flexibility (B =0.722, p <0.001) and a negative significant association with direct care nurses (B = -2.526, p = 0.008), working night shifts (B = -1.468, p = 0.041), overtime frequency (B = -0.480, p = 0.008), work demand (B = -1.704, p < 0.001), burnout (B = -0.657, p < 0.001), and secondary traumatic stress (B = -0.056, p = 0.045).

The burnout model was statistically significant, $F(12, 1024) = 91.54$, p < 0.001, $R^2 = 0.518$, adjusted R^2 = 0.512. Burnout score was positively associated with baccalaureate and master's educational level (B = 0.736, p = 0.001), overtime frequency (B = 0.273, p = 0.028), work demand (B = 0.754, p < 0.001), and secondary traumatic stress (B = 0.317, p < 0.001). Conversely, negative significant associations were found with the

female sex (B = -0.655, p = 0.046), ever-married status (B = -0.961, p < 0.001), flexibility in taking leave or vacation time (B = -0.426, p = 0.001), and compassion satisfaction (B = -0.316, p < 0.001).

Lastly, the secondary traumatic stress model was also statistically significant, $F(13, 1023) = 41.52$, $p<0.001$, $R^2 = .345$, adjusted $R^2 = 0.337$. Secondary traumatic stress demonstrated positive significant association with working at mixed medical-surgical units (B = 1.334, p = 0.034), working mixed day and night duties (B = 0.823, p = 0.041), and perceived burnout (B = 0.829, p < 0.001), while negatively associated with age of 41 years or older (B = -2.231, p=0.002) and compassion satisfaction (B = -0.078, p = 0.027) [see Table 3].

Table 3. Multivariable linear regression analysis of the mean ProQOL subscales (N = 1,037)

	Unstandardized Coefficients (*B*)	Standard Errors (SE)	95% Confidence Interval (CI) for *B*		*p*-value
			Lower 95% CI	Upper 95% CI	
Compassion Satisfaction					
Age	0.011	0.163	-0.308	0.330	0.946
Sex = female	-0.185	0.484	-1.133	0.763	0.702
Marital status = ever married	0.206	0.486	-0.746	1.158	0.671
Having and/ living with children = yes	-0.193	0.276	-0.733	0.347	0.483
Nursing position = direct care nurses	-2.526	0.956	-4.400	-0.652	**0.008**
Predominantly worked shift = night shift	-1.468	0.720	-2.879	-0.057	**.041**
Self-reported overtime frequency	-0.480	0.182	-0.837	-0.123	**0.008**
Self-reported breaks frequency	0.269	0.188	-0.099	0.637	0.151
Perceived flexibility in scheduling	0.722	0.195	0.339	1.105	**< 0.001**
Perceived flexibility in taking leave or vacation time.	0.231	0.194	-0.151	0.612	0.236
Perceived work demand at the workplace	-1.704	0.182	-2.060	-1.347	**< 0.001**
Perceived burnout	-0.657	0.040	-0.735	-0.578	**< 0.001**
Perceived secondary traumatic stress	-0.056	0.028	-0.110	-0.001	**0.045**
Burnout					
Age	0.166	0.117	-0.064	0.396	0.156
Sex = female	-0.655	0.328	-1.297	-0.012	**0.046**
Marital status = ever married	-0.961	0.272	-1.493	-0.428	**< 0.001**
Educational level = baccalaureate and masters	0.736	0.227	0.291	1.181	**0.001**
Worked at SGH ≥ 15 years	-1.390	0.817	-2.991	0.211	0.089
Self-reported overtime frequency	0.273	0.124	0.030	0.516	**0.028**
Self-reported breaks frequency	-0.091	0.130	-0.346	0.163	0.481
Perceived flexibility in scheduling	-0.144	0.135	-0.410	0.121	0.287
Perceived flexibility in taking leave or vacation time.	-0.426	0.133	-0.686	-0.165	**< 0.001**

	Unstandardized Coefficients (*B*)	Standard Errors (SE)	95% Confidence Interval (CI) for *B*		*p*-value
			Lower 95% CI	Upper 95% CI	
Perceived work demand at the workplace	0.754	0.128	0.504	1.005	< **0.001**
Perceived secondary traumatic stress	0.317	0.016	0.285	0.349	< **0.001**
Perceived compassion satisfaction	-0.316	0.019	-0.354	-0.279	< **0.001**
Secondary Traumatic Stress (STS)					
Sex = female	0.164	0.537	-0.889	1.217	0.760
Age ≥ 41 years	-2.231	0.733	-3.668	-0.793	**0.002**
Marital status = ever married	0.873	0.528	-0.162	1.908	0.098
Working at mixed medical-surgical units	1.334	0.629	0.101	2.568	**0.034**
Working mixed day and nights shifts	0.823	0.402	0.035	1.612	**0.041**
Having children and living with them	0.399	0.308	-0.205	1.004	0.195
Self-reported overtime frequency	-0.033	0.208	-0.441	0.375	0.874
Self-reported breaks frequency	0.034	0.211	-0.381	0.448	0.873
Perceived flexibility in scheduling	-0.126	0.221	-0.559	0.308	0.569
Perceived flexibility in taking leave or vacation time.	0.239	0.218	-0.188	0.667	0.272
Perceived work demand at the workplace	0.094	0.212	-0.321	0.509	0.657
Perceived burnout	0.829	0.043	0.744	0.914	< **0.001**
Perceived compassion satisfaction	-0.078	0.035	-0.146	-0.009	**0.027**

Multicollinearity was assessed using variance inflation factors (VIF), and all values were within acceptable limits (< 2.5).

Discussion

This study assessed the quality of life among a sizable cohort of nurses working in a large private healthcare system in Saudi Arabia and identified factors associated with the quality-of-life level. Overall, participants perceived their quality of life to be moderate. In this, compassion satisfaction, burnout, and secondary traumatic stress were rated as moderate to high, moderate, and low to moderate, respectively. These findings emphasize the imperative of addressing challenges faced by nurses to foster their quality of life.

The findings extend upon existing literature and are consistent with what has been reported in various contexts nationally (Ageel & Shbeer, 2022; Bahari et al., 2022) and abroad (Hegney et al., 2015; Hunsaker et al., 2015). In contrast, other studies have reported less favorable outcomes, including higher burnout and secondary traumatic stress, particularly during stressful periods, such as post-pandemic pressures (Albataineh & Alhawatmeh, 2024). Variations across studies may reflect differences in healthcare settings, staffing patterns, and organizational environments.

The demographic profile of our participants was comparable to the broader trends reported in the nursing workforce, particularly the predominance of female nurses with a baccalaureate degree, and relatively early career experience. The multicultural nature seen in our sample brings both opportunities and challenges in providing culturally competent care. Unlike a previous study that highlighted cultural challenges that appeared between nurses from culturally diverse backgrounds, our study did not detect significant differences based on cultural backgrounds (Kamau et al., 2023). Further, the prevalence of nurses working extended 12-hour shifts

underscores the demanding nature of their schedules, which have been linked to increased fatigue and decreased job satisfaction (Varghese et al., 2023). Also, the presence of nurses with children, many of whom do not live with them, highlights ongoing challenges in achieving a healthy work-life balance.

Nurses in this study expressed intrinsic motivation and dedication to patient care despite workplace stressors (Albataineh & Alhawatmeh, 2024). This perception indicates a crucial aspect linked to professional resilience (Alharbi et al., 2020; Cabrera-Aguilar et al., 2023; Hegney et al., 2015). This also suggests that positive professional experiences can coexist with work-related stress and emotional exhaustion. Similar findings have been reported among nurses working in highly demanding clinical settings, where compassion satisfaction may help buffer some of the negative effects of workplace stressors (Hegney et al., 2015; Sacco & Copel, 2018). Nevertheless, ongoing exposure to heavy workloads, long shifts, and emotionally stressful situations may weaken this protective effect over time.

The moderate burnout level observed in this study suggests a certain degree of emotional exhaustion and signals the need for targeted interventions to alleviate work-related stressors (Ndlovu et al., 2022). However, the presence of secondary traumatic stress, at a relatively manageable level, highlights the emotional burden of caring for traumatized patients, which necessitates organizational support and trauma-informed care practices (Bahari et al., 2022; Rushforth et al., 2023).

The regression analyses revealed the pivotal role of work-related factors in shaping nurses' ProQOL. Specifically, the negative association between compassion satisfaction and both work demands and the frequency of working overtime mirrors the positive association found between these factors and burnout. In the same vein, more flexibility in scheduling and taking leaves was found to be associated with higher compassion satisfaction and lower burnout. This is consistent with previous studies reporting that excessive workload, insufficient rest, and stressful work conditions inversely affect nurses' well-being and contribute to burnout (Ayoub et al., 2025; Sagherian et al., 2023). In our study, higher workload and overtime were associated with lower compassion satisfaction and higher burnout, whereas flexibility in scheduling and leave arrangements appeared to support work-life balance and professional resilience. In addition, the strong relationship between burnout and secondary traumatic stress emphasizes the interconnected nature of ProQOL dimensions and the need for supportive workplace interventions. Therefore, imperative interventions, such as allocating resources, optimizing work conditions, and fostering a healthy work environment, appeared to be appealing interventions to enhance satisfaction and well-being.

Lessons gleaned from this study stressed the importance of employing tailored measures to address ProQOL among nurses. However, this study is not without limitations. The cross-sectional design precludes causal inferences, and the self-reported nature of the data keeps it susceptible to response bias. In addition, including nurses in managerial roles may have influenced the findings, as their responsibilities and exposure to direct patient care differ from those of bedside nurses. However, they represented a relatively small proportion of the sample, which is highly unlikely to influence the overall results. Although the relatively large sample size strengthens the robustness of the findings, their applicability should be interpreted cautiously. Specifically, the results may be more relevant to similar private settings, but are not directly transferable to the public sector, where organizational structures, staffing models, workload expectations, and administrative policies may differ. Future research employing longitudinal designs could provide a more comprehensive understanding of the dynamics influencing nurses' ProQOL.

Implications for Nursing

Enhancing nurses' professional quality of life requires deliberate allocation of resources and optimization of working conditions. Healthcare organizations should implement practical strategies that support compassion satisfaction while reducing burnout and work-related stress. From a leadership perspective, the findings provide actionable guidance for nursing administrators and policymakers. Interventions, such as workload monitoring systems, nurses' well-being monitoring, evidence-based staffing models, flexible rostering policies, protected break scheduling, and limits on mandatory overtime, may help improve nurses' professional quality of life and identify emerging challenges. Nursing education programs may also benefit from incorporating professional resilience, stress management, compassion fatigue awareness, and self-

care strategies to better prepare nurses for emotionally demanding clinical environments.

Conclusion

This study contributes to the existing body of knowledge by providing insight into the multifaceted nature of nurses' professional quality of life. The findings indicate that nurses experienced moderate to high compassion satisfaction, moderate burnout, and low to moderate secondary traumatic stress. Both individual characteristics and workplace factors were found to significantly influence these outcomes. The findings further highlight the important influence of modifiable organizational factors, including workload, overtime demands, scheduling flexibility, and leave arrangements, on nurses' professional well-being and emotional resilience. Hence, hospital administrators and healthcare policymakers should prioritize evidence-based workforce strategies, such as optimized staffing models, flexible scheduling systems, protected break policies, and routine monitoring of staff well-being, to enhance resilience, improve the work environment, and ultimately strengthen overall professional quality of life.

Ethics Approval

Ethical approval number: ECC# 2023-23. Date: June 25, 2023.

Consent

Written consent was not obtained from the participants. The nurse's completion of the questionnaire was deemed as informed consent to participate in the study.

Acknowledgements

The authors acknowledge and thank the nurses who participated in this study.

Data Availability

All data generated or analyzed during this study is included in this published article and its tables.

Conflict of Interests

The authors declare that they have no conflict of interests.

Funding or Sources of Financial Support

The authors received no financial or material support for this research from any funding agency.

Authors' Contributions

Study Design: **RA**. Data Collection: **RM, MO, SA, HA, RC**. Data Analysis: **RA**. Study Supervision: **IE, RA**. Manuscript Writing: **RA**. Critical Revision for Important Intellectual Content: **RA, RM, MO, SA, HA, RC**.

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