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The Association between Professional Quality of Life, Occupational Burnout, Depression, Anxiety, and Stress among Iranian Nurses (2019)

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Abstract

Background: The professional quality of life (ProQOL) and occupational burnout are two central factors related to nurses' job performance. Nurses' job performance might be affected by work stress and compassion. In the present study, the association of ProQOL of nurses with burnout, depression, anxiety, and stress was investigated.

Materials and Methods: In this descriptive study, 282 nurses were invited to help with the survey. Demographics Scale, Maslach Burnout Questionnaire, Depression, Anxiety and Stress Scale (DASS-21), and ProQOL Questionnaire were used to collect the data.

Results: Most participants have an average degree of compassion satisfaction (CS) (63.2%) and compassion fatigue (CF) (57.1%). Also, most nurses had low scores for occupational burnout (39.3%). A significant negative correlation was found between CS with CF Scores ($p < 0.001$). Occupational burnout ($p = 0.019$), anxiety ($p = 0.015$), and depression ($p < 0.008$) Scores had a significant negative correlation with CS Scores. There was a significant correlation between the CF Scores and Scores of occupational burnout, anxiety, stress, and depression ($p < 0.001$).

Conclusion: The CS, depression, and occupational burnout were important variables affecting the level of CF. Healthcare service leaders and nurse managers should make efforts promoting emotional wellbeing among nurses.

Keywords: Anxiety, Burnout, Depression, Quality of Life, Nurses, Stress.

Introduction

The World Health Organization (WHO) has approved various dangers to employees' health, among which work-related stress is known as a global hazard [1]. Nurses are the leading provider of health care services, who are more vulnerable due to caring for injured patients [2]. Also, with the spread of diseases such as Coronavirus (COVID-19), nurses are at risk for anxiety, stress, depression, and other psychological problems [3-5]. They work in a tense and hard environment,

and unfavorable working conditions, such as long working hours or tensions, can reduce or damage their mental function [6]. Psychological risk factors, aggravating working physical hazards, and insecurity contribute to workplace violence and harassment. These factors can also disrupt a person's life balance, leading to serious emotional problems, depression, and burnout [7]. Several studies have shown that nurses are more likely to suffer from burnout than people in other occupations, so the nursing burnout rate is 31% [8-10]. According to some studies conducted in Iran, most nurses have some degrees of burnout [11], thus not being in good condition [12].

Occupational burnout is an emotional fatigue syndrome, depersonalization disorder, reducing personal accomplishment; it occurs in occupations dealing with people's lives [13]. Reducing one's ability to respond to the increasing demands of the environment exacerbates mental stress and burnout [11]. Job burnout is associated with physical, behavioral, and work-related changes in health care workers, causing dissatisfaction with medical services [8]. To prevent negative consequences and further improve patients' health outcomes, it is necessary to focus on the prevention of burnout in nurses [14].

In addition to focusing on nurses 'burnout, paying attention to the factors affecting health outcomes and increasing patients' satisfaction to improve their health outcomes is indispensable. Nurses with higher levels of quality of life achieve more patient satisfaction [15]. Given the importance of ProQOL, little information is available about the ProQOL of health workers in Iran [16]. The ProQOL assesses a caregiver's and rescuer's positive and negative feelings about their job. CS and CF are parts of the ProQOL seen in the occupational care workers associated with the afflicted victims [17]. CF is described as physical and spiritual fatigue after observing the sorrow of others, being reported by nurses highly [18]. As caring for others may lead to negative outcomes in careers, enjoying helping others can also reduce the negative aspects of working with people at risk. This kind of pleasure is called "compassion satisfaction" [17].

CS is associated with job gratification, quality of sleep [19], and greater social support [20]. Also, high levels of CS in nurses can increase their clinical competence [10]. Some nursing staff at work have shown high rates of burnout, but in the same situation, some nurses show better psychological performance [21]. It is possible that people with high levels of compassion use more internal resources to protect and deal with the effects of occupational stress [22]. Nurses with higher compassion levels are more likely to work well and show lower levels of burnout [23]. Burnout is regarded as the primary symptom of job stress and a type of delayed reaction to chronic workplace stressors and anxiety [10]. Given that human resources are the most valuable source for an organization, paying attention to the needs of employees is consequential to providing mental-physical health and satisfaction, thus increasing its productivity and efficiency.

Therefore, recognizing and preventing burnout can effectively raise the level of quality and satisfaction with diagnostic and therapeutic services [24]. As the ProQOL and burnout are two important factors related to the nurses' job performance, by recognizing them, it is possible to gain a better understanding of the existing conditions of nurses, thus taking steps to improve their conditions and adjusting risk factors. Their identification help to focus on preventing harmful consequences for the workplace and creating positive functions in individuals, thus reducing harmful or negative symptoms. Therefore, the present study aims to investigate the association of ProQOL with depression, anxiety, stress, and occupational burnout in nurses.

Materials and Methods

A descriptive study was designed between Jan to May 2019 and 2020 using a non-probability-based sampling method to evaluate the assoeiation between ProQOL, DASS21, and occupational burnout in Iranian nurses. The study was approved by the Ethics Committee at Rafsanjan University of Medical Sciences (IR.RUMS.REC.1397.099). In order to obtain informed consent, written and oral information was provided to all participants before entering the study, and participants expressed their informed the consent form by signing.

Inclusion criteria was listed as; nurses living in Rafsanjan, working in the health care sector, having one year of work experience, and caring directly for patients. Exclusion criteria included respondents with a mental illness history, a chronic illness, the death of a family member in the past 1 month, and an incomplete questionnaire.

Three hundred questionnaires were distributed among 450 nurses working in Ali Ibn Abi Taleb and Moradi hospitals in Rafsanjan city for a period of five months (response rate: 96.0%).

Out of 300 distributed questionnaires, 290 were returned (response rate: 96.0%). After removing the poorly completed questionnaires, the data of 282 participants were used in the final analysis.

Data were collected by four questionnaires: Socio-

demographic, ProQOL, occupational burnout, and DASS21.

a) Socio-demographic questionnaire: The demographic questionnaire consists of age, gender, marital status, children's number, education level, income, employment type, work experience, hospital ward, shift, and overtime hours per month.

b) Professional quality of life (ProQOL) questionnaire: The ProQOL questionnaire introduced by Stamm (2010) is used to investigate the ProQOL. It consists of three subscales with 30 items on the five-point Likert scale as follows: CS (10 items), secondary traumatic stress (10 items), and burnout (10 items). Each subscale is independent and cannot add subscores together and give a total score. CF is conceptualized through burnout and secondary traumatic stress. The subscales of secondary traumatic stress and burnout indicate a high risk of CF, and CS indicates a person's satisfaction and ability to provide care services. Standard scores for all three domains are based on the classification of above 42 (high), 41-23 (moderate), and below 22 (low) [17]. This questionnaire was used in Iran by Zakeri et al. The reliability related to CS, secondary traumatic stress, and burnout based on Cronbach's alpha coefficient were 0.82, 0.80, and 0.47, respectively [10].

c) Occupational burnout questionnaire: The Maslach occupational Burnout Questionnaire introduced by Maslach (1981) is used to investigate the burnout of nurses [25]. It is the most common tool for measuring occupational burnout, including 22 separate options and all three aspects of occupational burnout (emotional exhaustion, depersonalization, and personal accomplishment). The frequency rating of these emotions is from 0 (never) to 6 (every day). In this questionnaire, the higher the degree of burnout, the higher the emotional exhaustion and depersonalization. Maslach and Jackson calculated the internal reliability of each subscale. The questionnaire was verified and validated by Kaviani and Khaghanizade in Iran, and its reliability was greater than 0.7 in three dimensions using Cronbach's alpha coefficient [26].

d) Depression, Anxiety, and Stress Scale (DASS-21): The standard DASS21 evaluates depression, anxiety, and stress. It has 21 items and is a self-evaluation tool with depression, anxiety, and stress categorized into five levels. The DASS21 questionnaire has satisfactory psychometric properties, and its factor structure is proved by exploratory and confirmatory factor analysis [27]. In Iran, Cronbach's alpha coefficients were reported as 0.88, 0.85, 0.87, and 0.94 for depression, anxiety, stress, and the whole scale, respectively [9].

Mean, standard deviation, and minimum/maximum scores were used for descriptive analysis. Proportions and percentages were used to summarize the results of Likert-style questions. In the present study, bivariate correlations and regression analysis were used to examine the relationship between the variables. Also, p-value and 95% confidence intervals were reported. IBM SPSS 24 was used for all analyses, and statistical significance was set at .05.

Results

The age of nurses ranged from 22 to 52 years, with a median of 33 years and a mean of 33.15± 6.18 years. Most participants were female (n = 231; 81.9 %), married (n = 234; 83.0%), Bachelor of Nursing (n = 255; 90.4%), with 5-10 year-work experience (n = 127; 45.1%) (Table 1).

Table 1. Demographic characteristics of the participants and their associations with dimensions of ProQOL (n = 282)

Variables	Group	Professional quality of life		
		n (%)	Compassion satisfaction	Compassion fatigue
Age (yr.)	<30	106 (37.6)	F = 1.92 (0.14)	F = 0.74 (0.47)
	31-40	146 (51.8)		
	> 40	30 (10.6)		
Gender	Male	51 (18.1)	t = -0.74 (0.45)	t = 0.29 (0.76)
	Female	231 (81.9)		
Marital status	Unmarried / Widowed / Divorce	48 (17.0)	t = -1.23 (0.22)	t = -0.52 (0.60)
	Married	234 (83.0)		
Number of children	Yes	169 (59.9)	t = -1.78 (0.07)	t = 1.03 (0.30)
	No	113 (40.1)		

Educational level	Bachelor	255 (90.4)	t = -0.62 (0.53)	t = 1.10 (0.27)
	Master's	27 (9.6)		
Income (Million Riyal)	< 4	112 (39.7)	t = -0.60 (0.54)	t = -0.44 (0.65)
	> 4	170 (60.3)		
Type of employment	Hired	171 (60.6)	t = 1.75 (0.08)	t = -0.16 (0.87)
	Committed[a] / Contract recruiters[b]	111 (39.4)		
Work experience (yr.)	> 5	81 (28.7)	F = 3.65 (0.02)	F = 2.91 (0.05)
	5 -10	127 (45.1)		
	> 10	74 (26.2)		
Ward	Critical/intensive	100 (35.4)	F = 0.80 (0.45)	F = 0.63 (0.52)
	Emergency	40 (14.2)		
	Medical	142 (50.4)		
Shift	Fixed	26 (9.2)	t = 1.03 (0.30)	t = -1.80 (0.07)
	Rotational	256 (90.8)		
Overtime hours (h) per month	< 50	62 (22.0)	F = 1.72 (0.18)	F = 1.79 (0.16)
	50 - 80	171 (60.6)		
	> 80	49 (17.4)		

t = Independent t-test; F = analysis of variance test; a: it is obligatory to work for government for two years, b: annually contracted.

According to Table 2, most nurses had average scores for CS (177, 63.2%) and CF (160, 57.1%). Also, most nurses had low scores for occupational burnout (110, 39.3%). The levels of depression, anxiety, and stress are presented in Table 3. Most participants had medium depression (n = 116; 42.8%) and very intense anxiety (n = 159; 58.7%).

Table 2. Frequency of low, average, and high scores of variables in nurses (n = 282)

Variable	n	Low	Average	High
1. Compassion satisfaction (ProQOL)	280	6 (2.1)	177 (63.2)	97 (34.7)
2. Compassion fatigue (ProQOL)	280	117 (41.8)	160 (57.1)	3 (1.1)
3. Occupational burnout	280	110 (39.3)	103 (36.8)	67 (23.9)

The mean scores of CS and CF were 38.81 ± 6.52 and 47.20 ± 9.07, respectively. The mean scores of occupational burnout were 70.15 ± 12.08. The mean scores for anxiety, stress, and depression were 11.41 ± 4.07, 13.98 ± 4.70, and 11.87 ± 4.33, respectively.

As indicated in the table, there was a significant negative association between CS with CF ($p < 0.001$), occupational burnout ($p = 0.019$), anxiety ($p = 0.015$), and depression ($p < 0.008$) subscales. A significant positive correlation was found between CF with occupational burnout, anxiety stress, and depression subscales ($p < 0.001$). A significant positive correlation was between depression, anxiety, and stress scales (Table 4).

Table 3. Frequency of normal, mild, medium, intense, and very intense scores of depression, anxiety, and stress (n = 282)

Variable	n	Normal	Mild	Medium	Intense	Very intense
Depression	271	-	-	116 (42.8)	56 (20.6)	99 (36.6)
Anxiety	271	-	-	59 (21.8)	53 (19.5)	159 (58.7)
Stress	271	32 (11.8)	31 (11.4)	44 (16.2)	87 (32.2)	77 (28.4)

Table 4. Means, standard deviations, and correlations among ProQOL, occupational burnout, depression, anxiety, and stress (n = 282)

Variable	Mean	SD	Min	Max	1	2	3	4	5	6
1. Compassion satisfaction (CS)	38.81	6.52	18	50	1					
2. Compassion fatigue (CF)	47.20	9.07	26	71	-0.42 < 0.001	1				
3. Occupational burnout	70.15	12.08	22	110	-0.13 0.019	0.27 <0.001	1			
4. Anxiety	11.41	4.07	7	24	-0.14 0.015	0.29 < 0.001	0.40 < 0.001	1		
5. Stress	13.98	4.70	7	28	-0.06 0.27	0.24 < 0.001	0.42 < 0.001	0.75 <0.001	1	
6. Depression	11.87	4.33	7	27	-0.15 0.008	0.30 < 0.001	0.38 < 0.001	0.80 <0.001	0.80 <0.001	1

Note. ProQOL = Professional Quality of Life

As shown in Table 5, only CF predicted 18% of variance in CS (R2 = 18%) (p < 0.001). CS, depression, and occupational burnout predicted 25% of variance in CF (R2 = 25%); further, the best predictor was CS (p < 0.001). Finally, depression, anxiety, and stress did not predict CS. Only depression did predict CF (p < 0.001).

Table 5. Multiple regression analysis for underlying variables of CS and CF of nurses (n = 282)

	Variable	B	SE‡	β	t	P	95% Confidence interval for B	R^2
Compassion satisfaction	(Constant)	49.45	2.55	-	19.39	<0.001	44.43 _ 54.47	%18
	Compassion fatigue	-0.29	0.04	-0.41	-7.33	<0.001	-0.37 _ -0.21	
	Depression	-0.25	0.13	-0.16	-1.82	0.07	-0.52 _ 0.02	
	Stress	0.23	0.12	0.16	1.83	0.06	-0.01 _ 0.47	
	Marital status	1.77	0.93	0.10	1.89	0.05	-0.06 _ 3.60	
Compassion fatigue	Constant	54.45	4.26	-	12.78	<0.001	46.15 _ 62.95	%25
	Compassion satisfaction	-0.51	0.07	-0.37	-7.08	<0.001	-0.66 _ -0.37	
	Depression	0.40	0.11	0.19	3.45	0.001	0.17 _ 0.63	
	Occupational burnout	0.11	0.04	0.15	2.67	0.008	0.03 _ 0.19	

‡: Standard error; Marital status (single/divorced /widowed = 1 and married = 2).

Discussion

This study aimed to evaluate the nurses' ProQOL and its relationship with occupational burnout, depression, anxiety, and stress. Its results revealed that the higher the CS level, the lower the CF level, which had a protective effect against CF. These results are consistent with those of previous [28-33]. Thus, it is necessary to design an intervention in the future to enhance CS and target CF. Considering that CF involves more acute and disabling symptoms that are tough to cure [34], it is necessary to set goals and plans about CF more precisely. The adverse effect of CS on CF has not been confirmed in some studies [23, 35]. It may be due to self-compassionate individuals who experience less CF and can regulate their negative states. Lynch et al. showed that family caregivers could provide care and find moderate CF [36]. People's positive feelings and attitudes toward their job are called CS [10]. CF can reduce the ability to empathize with patients or families, fear of dealing with patients, sleep disorders, and mood swings, including restlessness, irritability, and anxiety [18]. Nurses could communicate their inherent motivation for care in this specific situation and gain CS through an active commitment to patients [37]. By appreciating the work of nurses, the community can strengthen the compassion of professionals who risk their lives to help patients [38]. Compassion skill programs need to be implemented to improve CS and quality of life among health professionals, thus increasing the quality of care and patient safety [39].

In the present study, the variables of anxiety, stress, and depression could not predict CS, and only depression and burnout predicted CF.

Attention to nurses' conditions and crises can affect levels of CS and CF. Trumello et al. (2020) found that professionals working in areas with higher infection rates had higher levels of stress and burnout and lower levels of CS [40]. Also, higher scores of CS have been observed in novice nurses who want to provide high-quality and evidence-based care to patients [41]. Given that work satisfaction is in the same direction as CS, higher levels of CS can be achieved by interventions to increase job satisfaction and thus reduce CF.

However, a further study (2017) showed CS to be predicted by work stress and CF. On the other hand, role conflict predicts CF, while ambiguity predicts CS, which is inconsistent with the results of the present study [20]. These findings show that various factors in different cultural and social conditions can affect CS and CF. Therefore, the mental health of health care workers, especially nurses, needs to be further investigated, and targeted prevention and intervention programs, including training in critical situations [42], are necessary to increase CS and reduce CF.

Craigie et al. showed a significant negative association between DASS subscale scores and CS [28]. The association of anxiety, stress, and depression with quality of life has also been reported in some studies [43]. In the present study, stress reduction did not have such an effect on CS. This can be due to the lower level of stress in nurses studied. This result is consistent with the study of Hegney et al., in which CS did not significantly correlate with anxiety and stress scales [44]. The different factors and their levels affecting psychological functioning in nurses are important reasons for this result.

Few studies directly have measured dimensions and burnout levels in the ProQOL. This study showed that the higher the levels of occupational burnout in nurses, the higher CF and depression, as well as the lower CS. These results indicate that CS is an important and influential factor in controlling the rest of the variables. According to the results, CS is mostly affected by occupational burnout, negatively affecting nurses' positive activities. Ray et al. confirmed these results [29]. Contrary to the results of this study, no conclusive overlap was observed between occupational burnout and depression and between occupational burnout and anxiety in Koutsimani et al. due to the different structures and robust constructs of occupational burnout, depression, and anxiety [44]. In the present study, burnout was associated with stress, depression, and anxiety, in line with some other studies [46]. In several studies, burnout was strongly associated with depression but had little to do with anxiety [46]. According to Iacovides et al., burnout and stress have a strong relationship [47]. Employees diagnosed with depression, anxiety disorders, and occupational stressors suffer more from burnout [46, 47]. Therefore, paying attention to the causes of stress, depression, and anxiety is very important for reducing burnout in the nursing system.

The cause-and-effect relationship of the considered variables could not be studied due to the cross-sectional nature of the study. More participants were women, making generalization difficult for both sexes. The study was conducted on nurses in southern Iran, limiting the generalizability of the findings. One of the strengths of the present study was the comprehensive review of nurses' conditions in an acceptable sample and attention to various and influential factors to better understand the reasons for occupational stressors. This study highlighted the attention to CF and burnout and the factors affecting it.

Conclusion

Despite nurses' stressful and challenging work environment, CS and good levels of psychological performance are observed in many nurses. CS has a protective effect against CF, and this relationship is independent of the effect of psychological function examined in the present study. CS, depression, and occupational burnout is confirmed as a variable impacting the CF level. Factors affecting CF elements must be considered to promote emotional well-being among nurses, and more research is required. Policymakers, healthcare service leaders, and managers should promote emotional well-being among nurses. Nurses' job performance can affect their productivity and efficiency due to their work stress and compassion. Furthermore, paying attention to burnout and its factors may improve nurses' work and patient outcomes.

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