



The Relationship between Professional Quality of Life and Caring Behavior among Nurses Working in Intensive Care Units

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Abstract

Introduction: The professional quality of life (ProQOL) is considered an influential and determining factor in mental health, job performance, and family performance of people. The present study was conducted to determine the relationship between ProQOL and caring behavior in nurses working in Intensive Care Units (ICUs).

Methods: This correlational study was conducted on 130 nurses working in the ICUs in Nasiriyah, Iraq. Sampling was done using the census sampling method. Data was collected using Stom's Professional Quality of Life Questionnaire and Nurses' Caring Behavior Scale. The results were analyzed using SPSS software version 27 and Pearson's correlation coefficient.

Results: The mean score of compassion satisfaction, compassion fatigue, and secondary trauma stress was 33.38 ± 10.24 , 27.43 ± 5.13 , and 26.10 ± 6.60 , respectively. The mean of caring behaviors score was 19.15 ± 7.83 . A direct and significant relationship was observed between compassion satisfaction and caring behaviors ($p < 0.001$, $r = 0.638$). Also, an inverse and significant relationship was observed between compassion fatigue and caring behaviors ($p < 0.001$, $r = -0.382$).

Conclusion: Based on the results of this study, there is a direct and significant relationship between compassion satisfaction and caring behaviors and an inverse relationship between compassion fatigue and caring behaviors. As a result, it seems necessary to plan to improve ProQOL and the caring behaviors of nurses in ICUs.

Keywords: Behavior, Care, Intensive Care Unit, Nurse, Quality of life

Introduction

The intensive care units (ICUs) are one of the vital and important parts of hospitals, where the treatment and care of patients are carried out to reduce mortality and hospitalization complications. In these wards, critically ill patients are expected to be cared for by personnel with special skills (1). Nurses who work in these wards experience a high level of stress. Based on the results of studies, stress, and fatigue due to work in such wards affect many basic aspects of nurses' performance, such as attention to

detail, energy level, decision-making power, creativity, health, and quality of life. Basically, stressful wards not only interfere with working; but it also affects the quality of work and may lead to medical errors (2).

Therefore, it is necessary for nurses who work in ICUs, as one of the most important groups of health system service providers, to have a good professional quality of life (ProQOL), so they can provide care to patients in an optimal way (3). The ProQOL consists of two dimensions: compassion

DOI:



satisfaction and compassion fatigue. The dimension of compassion satisfaction is defined as a person's satisfaction with his ability to perform his work correctly and excellently (4). The dimension of compassion fatigue is also defined as the adverse psychological effects experienced by the individual. Therefore, the ProQOL has positive and negative aspects; In fact, "compassion satisfaction" is a positive aspect, and "compassion fatigue" is its negative aspect (5).

Based on the results of various studies, factors such as age, illness, social environment, job, and stress are effective on the ProQOL. Therefore, it can be expected that in high-stress ICUs where patients are hospitalized with acute and critical conditions and in addition, nurses face unpredictable changes and unrealistic expectations of patients and their families; the ProQOL of nurses will be affected (6).

The ProQOL is considered an influential and determining factor in mental health, job performance, and family performance of people (7, 8). Also, the ProQOL leads to motivation in human resources and improvement of job satisfaction (9). Therefore, examining the ProQOL and trying to improve it will play an effective role in increasing the level of personal and social health of people. In this context, this study was designed to determine the relationship between the ProQOL and the caring behavior of nurses in ICUs.

Materials and Methods:

The present study is a correlational study that was conducted on 130 nurses working in the ICUs of hospitals in Nasiriyah, Iraq in 2024. There are four hospitals in Nasiriyah and a total of 130 nurses are working in the ICUs of these hospitals. Therefore, sampling was done by census sampling method, and all these 130 nurses who met the inclusion criteria; entered the study. Inclusion criteria included willingness to participate in the study, having a nursing degree, working in the ICU, and the ability to speak and understand Arabic.

Data were collected using the Demographic Profile Form, Stam's ProQOL questionnaire, and the Caring Behaviors of Nurses Scale.

The Demographic Profile Form included items such as gender, age, marital status, level of education, occupational duration, type of shift, and occupational status.

The ProQOL questionnaire was developed by Stam (2010). This questionnaire consists of 30 questions and 3 subscales (compassion satisfaction, compassion fatigue, and secondary traumatic stress) which are graded using a 5-point Likert scale (never = 1 to always = 5). Each subscale contains 10 questions. The scores of each item are obtained from the sum of all its questions. Each subscale is independent and the scores of the subscales cannot be added together. The validity of the questionnaire has been determined by the content validity method. Cronbach's alpha related to compassion satisfaction, compassion fatigue, and secondary traumatic stress were 0.82, 0.80, and 0.74, respectively (10). The Arabic version of this questionnaire is available via <https://proqol.org/proqol-measure>.

The Caring Behaviors of Nurses Scale was designed by Kolemba et al. (2002). This scale includes 6 questions that are graded based on a 6-point Likert scale (always=5, often=4, sometimes=3, rarely=2, rarely=1, never=0). The range of scores in this questionnaire is 0 to 30, and higher scores indicate more caring behaviors by nurses (11). Since the standardized Arabic version of this questionnaire was not available, it was translated at first into Arabic. Then, it was translated into English once again by two professional English translators and finally compared with the original version. The final version was confirmed by the faculty members of the College of Nursing at the National University of Science and Technology, Dhi Qar, Iraq. To examine its content validity, the questionnaire was submitted to 7 faculty members of the College of Nursing at the National University of Science and Technology, Dhi Qar, Iraq.

To fulfill this study, the researchers referred to the hospitals upon receiving permission from the Vice Chancellor's Office for Research at Islamic Azad University, Isfahan (Khorasgan) Branch, Isfahan, Iran, and the relevant officials. Then 130 nurses who met the inclusion criteria were invited to participate in the study. At first, the goals and methodology of the study were explained to the nurses, and if they were willing to participate in the study, informed consent was obtained. The participants' information was kept confidential and they were assured that they could withdraw from the study at any time they desired. The questionnaires were completed by the participants under the supervision of the researcher.

The data was analyzed by the SPSS software (version 27). The descriptive data was presented in terms of number, percentage, mean, and standard deviation. To determine the relationship between the ProQOL and the caring behavior of nurses, Pearson's correlation coefficient was used. The level of significance in this study was $P < 0.05$.

Results:

A total number of 130 nurses were studied. The demographic characteristics of the participants are shown in Table 1.

Table 1: Demographic characteristics of study participants (n = 130)

Variables	Group	N (%)	Mean(SD)
Gender	Female	60 (46.2)	---
	Male	70 (53.8)	
Age (years)	21-30	92 (70.8)	29.41±5.69
	31-40	30 (23.1)	
	41-50	8 (6.2)	
Marital status	Single	58 (44.6)	---
	Married	68 (52.3)	
	Divorced	4 (3.1)	
Level of education	Preliminary nursing school	38 (29.2)	---
	Institute of Medical Technology	26 (20.0)	
	Bachelor	53 (40.8)	
	MSc and PhD	13 (10.0)	
Type of shift	Morning	76 (58.5)	---
	Evening	54 (41.5)	
Occupational status	Governmental	113 (86.9)	---
	Private	17 (14.1)	
Occupational duration (years)	1-5	69 (53.1)	7.62±6.60
	6-10	26 (20.0)	
	11-20	29 (22.3)	
	>20	6 (4.6)	

Table 2: Frequency distribution and mean of subscales of ProQOL score in study participants (n=130)

Subscale	Level			Min score	Max score	M (SD)
	low	Average	High			
Compassion satisfaction	24(18.5)	83(63.8)	23(17.7)	10.00	50.00	33.38±10.24
Compassion fatigue	26(20.0)	85(65.4)	19(14.6)	13.00	39.00	27.43±5.13
Secondary traumatic stress	18(13.8)	88(67.7)	24(18.5)	11.00	45.00	26.10±6.60

According to the results of Table 2, the mean ProQOL score in the dimensions of compassion satisfaction, compassion fatigue, and secondary trauma stress is 33.38±10.24, 27.43±5.13, and 26.10±6.60 respectively. In 83 nurses (63.8 percent), 85 nurses

(65.4 percent), and 88 nurses (67.7 percent), compassion satisfaction, compassion fatigue, and secondary trauma stress were observed at an average level, respectively.

Table 3: Frequency distribution and mean of caring behavior score in study participants (n=130)

Variable	Level	N (%)	Min score	Max score	M (SD)
Caring behavior	Low	22 (16.9)	0.00	30.00	19.15±7.83
	Average	80 (61.5)			
	High	28 (21.5)			

Based on the results of Table 3, caring behavior was observed in 80 nurses (61.5%) at an average level.

The mean of caring behaviors score in nurses was 19.15±7.83.

Table 4: Relationship between ProQOL and caring behavior in study participants (n=130)

Subscale	Caring behavior	
	Correlation coefficient	P-value
Compassion satisfaction	0.638	<0.001
Compassion fatigue	-0.382	<0.001
Secondary traumatic stress	0.035	0.696

Based on the results of Pearson's correlation coefficient calculation in Table 4, a direct and significant relationship was observed between the satisfaction caused by occupational compassion and their caring behaviors ($p < 0.001$, $r = 0.638$). So, with the increase in the level of satisfaction caused by occupational compassion in nurses, the score of their caring behaviors has been higher.

Also, an inverse and significant relationship was observed between fatigue caused by occupational compassion and their caring behaviors ($p < 0.001$, $r = -0.382$). Thus, with the increase in the level of fatigue caused by occupational compassion in nurses, the score of their caring behaviors has been lower.

No significant relationship was observed between the nurses' quality of life score in the secondary trauma stress dimension and their caring behavior score ($p = 0.696$).

Discussion:

The present study aimed to determine the relationship between ProQOL and caring behavior in nurses working in ICUs. The results of this study showed that the ProQOL of most nurses in the dimensions of compassion satisfaction (63.8%), compassion fatigue (65.4%), and secondary trauma stress (67.7%) is at an average level.

The results of Mohammadi et al. (2017) study in Iran showed that most of the nurses in the ICU experienced moderate levels of ProQOL. In this

study, 55.3% of nurses experienced high levels of compassion satisfaction and 54.5% and 58.8% of them experienced moderate levels of burnout and secondary trauma stress respectively (12). The results of this study related to the dimensions of burnout and secondary trauma stress are lower than the present study. In the present study, only 17.7% of nurses working in ICUs reported high compassion satisfaction, which is much lower compared to the study of Mohammadi et al. (2017). The difference in the results of this study with the current study can be caused by the cultural differences of the study populations.

In another study conducted in Iran by Khanzadeh et al. (2018), the mean of ProQOL score of nurses working in neonatal intensive care units was higher than the average. It was reported at the optimal level (13). The difference between the results of this study and the results of the current study can be due to the difference in the data collection tools. In Khanzadeh et al. (2018) study, the Walton questionnaire was used to evaluate the ProQOL of nurses, which is different from the Stam ProQOL questionnaire that was used in the present study.

In the study of Ruiz-Fernández et al. (2020), the levels of fatigue compassion, and burnout of nurses were reported to be high. Also, in this study, the level of compassion satisfaction was estimated to be lower than the average (14), which is somewhat in line with the results of the present study. Also, in the study of Jang et al. (2016) in South Korea, the

results showed that the mean scores of compassion satisfaction, compassion fatigue, and secondary trauma stress were 33.84, 28.38, and 28.33 respectively (15), which is in line with the results of the present study. Also, according to the results of this study, Inocian et al. (2021) in a study conducted in Saudi Arabia concluded that the majority of nurses during the COVID-19 pandemic reported a moderate level of compassion satisfaction, burnout, and secondary trauma stress (16).

Based on other results of this study, the caring behavior of most nurses (61.5%) was observed at an average level. The results in the field of care behaviors of nurses are different in different countries. For example, in the study of Majid et al. (2023), which was conducted in the hospitals of Baghdad, Iraq; the results showed that almost 74% of nurses had positive health behaviors related to the prevention of pressure ulcers (17). However, in the study by Abd Ali and Qassem (2023), in Nasiriyah, Iraq, the results showed that the job performance of nurses is at a low level (18). On the other, in the study of Hosseinzadeh et al. (2016) in Iran, the results showed that the care behaviors of nurses were optimal and focused more on the physical aspect of care (19). Also in the study by Shalaby et al. (2018) in Egypt, the majority of nurses showed a high score in perceived caring behaviors (20). Similar to the results of the present study, in the study of Aupia et al. (2017) in Indonesia, nurses generally rated each domain of care behaviors with an average score (21). The difference in the results of different studies may be due to the fact that care behaviors or job performance questionnaires were completed by the nurses themselves, so the way they were completed affected the results.

According to the results of the present study, with the increase in the level of compassion satisfaction in nurses, the score of their caring behaviors has been higher. Also, with the increase in the level of compassion fatigue in nurses, the score of their caring behaviors has been lower. However, no

significant relationship was observed between the score of secondary trauma stress and the score of caring behaviors of nurses. Similar to the results of the present study, the results of the study by Abd Ali and Qassem (2023) showed that the nurses' performance in providing nursing services is significantly affected by the factors of the nurses' work environment, including the risks caused by the physical environment (18). Also, in the study of Inocian et al. (2021), they concluded that the positive and negative aspects of the ProQOL had an impact on the care behaviors of clinical nurses. So the improvement in the ProQOL can have a positive effect on the amount of caring behaviors among clinical nurses (16). In this regard, the results of the study by Alinejad-Naeini et al. (2024) in Iran also showed that having a higher ProQOL in pediatric nurses, in addition to affecting the mental health of nurses, can also affect their caring behaviors (22). The results of Aty et al.'s (2020) study in Indonesia, also showed that nurses' work stress does not affect their caring behavior (23).

One of the limitations of the present study is the collection of data through the questionnaire. Therefore, since the study findings are the results of the statements of the study samples; there is a possibility of decreasing the accuracy in responding due to various reasons such as worry and time and environmental conditions. The researchers tried to control this limitation to some extent by providing suitable conditions at the time of answering the questionnaire. Also, the study population was only nurses working in the ICUs in Nasiriyah, Iraq, and it cannot be generalized to other communities. Assessing the caring behaviors from the nurses' point of view is another limitation of the study that could have affected the results of the study.

Conclusion:

According to the results of the present study, there is a direct and significant relationship between the compassion satisfaction and caring behaviors of

nurses. Also, there is an inverse and significant relationship between compassion fatigue and nurses' caring behaviors. However, there is no significant relationship between secondary trauma stress and nurses' caring behaviors. The results of this study can help health managers to design and implement programs for clinical nurses to improve their professional quality of life and promote caring behaviors.

Acknowledgments:

This article is taken from the Master's thesis in the field of medical surgical nursing. The authors of this article express their gratitude to the officials and respected personnel of the selected hospitals and all the participants in the study.

Conflict of interest:

The authors declare that there is no conflict of interest in the present study

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