

Original Article

Association of Compassion Satisfaction and Burnout among Nurses Dealing with COVID-19 Patients in Intensive Care Unit

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ABSTRACT

Background: The COVID-19 pandemic has placed unprecedented stress on healthcare workers, particularly nurses working in intensive care and high-dependency units. Understanding the dynamics of compassion satisfaction and burnout in this context is crucial for developing effective support mechanisms.

Objective: This study aimed to assess the levels of compassion satisfaction and burnout among nurses caring for COVID-19 patients and to explore the association between these variables and demographic factors.

Methods: A cross-sectional study was conducted in six tertiary care hospitals in Khyber Pakhtunkhwa, Pakistan, from February to December 2021. A total of 365 nurses were selected using a convenience sampling technique. Data were collected through demographic questionnaires and modified ProQOL scales for compassion satisfaction and burnout. Statistical analysis was performed using SPSS version 25, employing chi-square tests for categorical variables and ANOVA for continuous variables to explore associations and differences.

Results: The mean compassion satisfaction score was high at 43.93 ± 4.17 , with significant differences observed across age, qualification, and experience groups but not between genders. Male nurses reported a slightly higher compassion satisfaction score (43.96 ± 4.14) than female nurses (43.92 ± 4.19). The average burnout score was 23.26 ± 4.09 , with significant differences noted across gender and age groups. Male nurses and those in older age groups exhibited higher levels of burnout. A moderate negative correlation between compassion satisfaction and burnout was identified ($r = -0.32$).

Conclusion: The study highlights high levels of compassion satisfaction among nurses, with variations across demographic factors. A moderate negative association between compassion satisfaction and burnout suggests that enhancing nurses' compassion satisfaction could be a strategic approach to mitigate burnout. Healthcare systems should implement targeted interventions to support nurses' well-being, especially for more vulnerable groups.

Keywords: Compassion Satisfaction, Burnout, COVID-19, Nurses, Intensive Care, Healthcare Workers, Cross-sectional Study, ProQOL

INTRODUCTION

In December 2019, the emergence of COVID-19 in Wuhan, China, marked the beginning of a global health crisis that rapidly evolved, leading the World Health Organization to declare it a pandemic by March 11, 2020 (1,2). The pandemic has significantly impacted the quality of life of healthcare workers, particularly those on the frontline, exposing them to numerous stressors. These include inadequate access to necessary protective gear, the physical strain associated with prolonged use of personal protective equipment, a lack of support, extended work hours, and sudden changes in job roles. Furthermore, healthcare professionals grapple with the anxiety of potentially transmitting the virus to family members, necessitating drastic measures such as isolating themselves from their loved ones (3,4,5). The constant evolution of protocols due to emerging information about the virus adds to the uncertainty of its containment, compounded by the emotional toll of witnessing patient mortality (4,6). Nurses, tasked with the direct care of critically ill patients in intensive care units, face a challenging environment that predisposes them to stress and burnout (7). Their pivotal role in ensuring patient safety, by mitigating risks and maintaining vigilance, underscores the importance of their well-being (8).

Empathy and compassion are intrinsic to the nursing profession, fostering a sense of satisfaction and fulfillment derived from caring for others (9). Compassion satisfaction, characterized by the development of empathetic relationships with patients and the emotional rewards of alleviating their suffering, signifies a positive dimension of nursing. However, the intense emotional engagement required can lead to compassion fatigue, a form of secondary traumatic stress that manifests through a decline in attention to patient needs and various physical and psychological symptoms, including headaches, fatigue, depression, and apathy (10,11). This condition often arises when nurses feel powerless to relieve suffering, highlighting the complex emotional landscape of the nursing profession (12). The fluctuation between compassion satisfaction and fatigue is a natural aspect of nursing, reflecting the emotional investment in patient care (13). Recognizing compassion satisfaction as a vital component of nursing underscores its role in attracting individuals to the profession (14).

Burnout among healthcare workers, particularly nurses, presents a significant challenge, adversely affecting productivity and quality of care (15). Characterized by emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment, burnout results from chronic workplace stress that has not been successfully managed (Patel et al., 2018, 16). The repetitive waves of COVID-19 in Pakistan have exacerbated these issues, underscoring the need to assess the levels of compassion satisfaction and burnout among nurses caring for COVID-19 patients. This assessment is crucial for developing strategies to support the mental health and well-being of nurses, ensuring the sustainability of quality patient care amidst ongoing health crises.

MATERIAL AND METHODS

The methodology of this study was cross sectional, designed to assess the levels of compassion satisfaction and burnout among nurses working in the intensive care and high dependency units of six tertiary care hospitals in Khyber Pakhtunkhwa, Pakistan. Conducted from February to December 2021, the research targeted the entire population of nurses working in these critical care settings across all shifts. With a 95% confidence level and a 5% margin of error, the sample size was calculated to be 370. However, due to incomplete information in five checklists, the final sample size was adjusted to 365 participants. The selection was made using a convenience sampling technique, focusing on nurses directly involved in the care of patients diagnosed with COVID-19 and who voluntarily agreed to participate. Those randomly assigned to duties in the intensive care or high dependency units without a willingness to participate were excluded.

Data collection was divided into two segments: the first gathered demographic information, including gender, age, qualifications, and experience of the participants; the second part assessed professional quality of life through a modified version of the ProQOL instrument, streamlined into two domains for this study. The Compassion Satisfaction (CS) scale comprised 10 items, rated on a scale from 1 (never) to 5 (very often), boasting a Cronbach alpha of 0.88 (17). Similarly, the Burnout scale consisted of 10 items with the same rating scale and reported a Cronbach alpha of 0.75 (17).

Analysis of the collected data was performed using SPSS version 25. The association between compassion satisfaction, burnout, and demographic variables was examined using chi-square tests, while ANOVA was employed to explore differences within groups.

The study received approval from the relevant ethical review committee, ensuring adherence to the principles outlined in the Declaration of Helsinki. Informed consent was obtained from each participant, emphasizing the voluntary nature of their involvement. Participants were assured of the confidentiality of their data, which was to be used solely for the purposes of analysis within this study.

RESULTS

The study examined the demographic characteristics, compassion satisfaction, and burnout among 365 nurses working in intensive care and high dependency units, revealing significant insights into their professional quality of life during the COVID-19 pandemic. The sample comprised predominantly female participants, accounting for 71.2% of the total, compared to 28.8% male participants. Age distribution showed a concentration in the younger age groups, with 38.9% of participants aged between 22 to 25 years and 35.3% between 26 to 30 years. The qualifications of participants varied, with the majority holding a Bachelor of Science in Nursing (BSN) at 45.8%, followed by Post-RN and Master of Science in Nursing (MSN) qualifications. In terms of experience, a significant portion of the sample (42.5%) had 1 to 2 years of experience, highlighting the relatively young workforce in these critical care settings (Table 1).

The analysis of compassion satisfaction (CS) revealed an overall mean score of 43.93 with a standard deviation (SD) of 4.17, indicating a moderate level of compassion satisfaction among the nurses. When examined by demographic variables, there was no significant difference in CS scores between male and female nurses, as evidenced by a p-value of 0.936. Age, however, showed a significant association with CS, particularly among nurses aged 18-21 years and 22-25 years, who reported higher CS scores, suggesting that younger nurses might experience higher levels of satisfaction from providing care (Table 2). Qualification levels also influenced CS

significantly, with registered nurses reporting notably lower CS scores compared to their more educated counterparts, highlighting the impact of education on professional fulfillment in nursing (Table 2).

Table 1: Demographic Characteristics of Participants (N=365)

Demographic Variable	Frequency (n=365)	Percentage (%)
Gender		
Male	105	28.8
Female	260	71.2
Age		
18-21 years	25	6.8
22 to 25 years	142	38.9
26 to 30 years	129	35.3
31 and above	69	18.9
Qualification		
Registered Nurse	25	6.8
BSN	167	45.8
Post-RN	88	24.1
MSN	85	23.3
Experience		
1 to 2 years	155	42.5
3 to 5 years	81	22.2
6 to 10 years	72	19.7
11 and above	57	15.6

Table 2: Compassion Satisfaction (CS) by Demographic Groups

Variable	Mean	SD	F-value	P-value
Overall CS	43.93	4.17		
Gender			0.006	0.936
Male	43.96	4.14		
Female	43.92	4.19		
Age			3.395	0.018
18-21 years	43.60	2.38		
22 to 25 years	44.79	3.99		
26 to 30 years	43.34	4.41		
31 and above	43.39	4.35		
Qualification			23.706	0.000
Registered Nurse	37.76	6.62		
BSN	44.61	3.81		
Post-RN	44.29	3.40		
MSN	44.03	3.12		
Experience			5.440	0.001
1 to 2 years	43.45	5.35		
3 to 5 years	45.49	1.67		
6 to 10 years	43.18	3.47		
11 and above	43.98	3.19		

Table 3: Burnout by Demographic Groups

Variable	Mean	SD	F-value	P-value
Overall Burnout	23.2658	4.09		
Gender			6.574	0.011
Male	24.12	4.38		
Female	22.91	3.92		
Age			6.975	0.000
18-21 years	23.92	2.85		
22 to 25 years	22.66	3.88		
26 to 30 years	22.79	4.80		
31 and above	25.14	2.68		
Qualification			2.471	0.062
Registered Nurse	24.96	1.01		
BSN	22.85	3.76		
Post-RN	23.73	4.07		
MSN	23.09	5.06		

Table 4: Association of Compassion Satisfaction with Burnout

CS Level	Low Burnout	Average Burnout	High Burnout	Sig	r
Low satisfaction	0	3	0	0.000	-0.32
Average satisfaction	4	76	0		
High Satisfaction	0	256	26		

Table 5: Association of Demographic Variables with Compassion Fatigue and Burnout

Variable	Compassion Fatigue	Burnout
Gender	0.003	0.000
Age	0.000	0.000
Education	0.000	0.000
Experience	0.000	0.000

Burnout scores across the sample averaged at 23.2658 (SD = 4.09), with gender differences emerging as significant; male nurses reported higher burnout levels than female nurses, as shown by a p-value of 0.011. Age was again a significant factor, with the oldest and youngest groups showing higher burnout scores, indicating that burnout may affect those at the beginning and later stages of their careers more profoundly (Table 3). The impact of qualifications on burnout was less pronounced, with a p-value of 0.062 suggesting a marginal difference between educational levels (Table 3).

The relationship between compassion satisfaction and burnout was further explored, revealing a significant negative correlation ($r = -0.32$). This indicates that as compassion satisfaction increases, levels of burnout tend to decrease, underscoring the protective role of compassion satisfaction against burnout among nurses. Participants with high levels of satisfaction reported significantly lower instances of high burnout, emphasizing the importance of fostering a work environment that promotes professional fulfillment (Table 4).

Furthermore, the association of demographic variables with compassion fatigue and burnout was statistically significant across all categories (gender, age, education, experience), indicating that these factors play a crucial role in the professional quality of life of nurses. The findings suggest that younger, less experienced, and lower-qualified nurses are particularly vulnerable to compassion fatigue and burnout, necessitating targeted interventions to support these groups (Table 5).

DISCUSSION

This study was conducted to evaluate the levels of compassion satisfaction and their correlation with burnout among nurses caring for COVID-19 patients in intensive care and high-dependency units. The findings revealed a high overall compassion satisfaction score of 43.93 ± 4.17 , indicating a significant variance within the groups categorized by age, qualification, and experience, while gender showed no significant difference. The heightened compassion satisfaction could be attributed to the culturally ingrained social relationships within the Pashtun community, fostering a sense of familiarity and empathy towards patients, especially in life-

threatening conditions. This observation aligns with a study from Saudi Arabia, which also reported above-average levels of compassion satisfaction among nurses (18), and is consistent with findings from previous research conducted on Saudi Arabian (19) and Chinese nurses (20).

Interestingly, the study discovered a slight difference in compassion satisfaction scores between male (43.96 ± 4.14) and female nurses (43.92 ± 4.19), contradicting a study from Ethiopia where female nurses exhibited higher compassion satisfaction, with a significant gender disparity (21). This discrepancy could be explained by cultural differences in stress management and support systems, suggesting that a strong social support network is instrumental in mitigating burnout and compassion fatigue (23).

Burnout scores averaged at 23.26 ± 4.09 , with male nurses experiencing higher levels of burnout compared to their female counterparts. The study noted significant differences in burnout across gender and age groups, but not in relation to qualification and experience. The higher burnout among males could be linked to cultural norms dictating their roles within the healthcare setting. This finding is partially supported by studies in Pakistan (24,25) and contrasts with studies from Saudi Arabia and China, where younger nurses reported higher secondary traumatic stress and burnout, yet age was not directly correlated with compassion satisfaction or burnout (18,20).

A moderate negative association between compassion satisfaction and burnout was identified (-0.32), resonating with findings from Saudi Arabia where a similar relationship was observed ($r=-.356$, $p < .001$) (18). This relationship is further supported by a Turkish study, indicating that higher compassion satisfaction is associated with lower levels of burnout (28).

The study underscores the complex interplay between demographic factors, compassion satisfaction, and burnout among nurses, emphasizing the protective role of compassion satisfaction against burnout. The findings suggest that initiatives aimed at enhancing nurses' compassion satisfaction could potentially mitigate burnout levels, particularly among male and older nurses who appear more susceptible.

Despite its insights, the study acknowledges certain limitations, including its reliance on self-reported measures and the potential for cultural biases affecting the perception of compassion satisfaction and burnout. Furthermore, the convenience sampling method might limit the generalizability of the findings to other settings or regions.

In light of these observations, future research should explore intervention strategies that bolster compassion satisfaction and address the specific needs of demographic groups more vulnerable to burnout. Additionally, examining the role of cultural factors in shaping nurses' experiences of compassion satisfaction and burnout could offer deeper insights into tailoring support mechanisms for healthcare professionals in diverse contexts.

CONCLUSION

The study concludes that nurses working in intensive care and high-dependency units exhibit high levels of compassion satisfaction, with variations observed across gender, age, and educational background. Male nurses and those in older age groups reported higher levels of burnout, indicating a moderate negative association between compassion satisfaction and burnout. These findings underscore the importance of fostering an environment that enhances compassion satisfaction to mitigate burnout among nurses, particularly for those demographic groups identified as more vulnerable. Healthcare institutions should consider implementing targeted interventions that support the mental well-being of nurses, such as stress management programs, peer support groups, and professional development opportunities. By addressing these factors, healthcare systems can improve job satisfaction, reduce burnout rates, and ultimately enhance patient care quality.

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