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Original Article

The Influence of Demographic and Job-related Characteristics on Nurses' Compassion Satisfaction and Fatigue

Shrestha S[1], Sharma S[2], Gurung SK[3], Chapagain R[3], Dhungana BR[3]

[1] Pokhara Academy of Health Science, Pokhara, Nepal,
[2] School of Health and Allied Sciences, Pokhara University, Pokhara, Nepal,
[3] School of Business, Pokhara University, Pokhara, Nepal

Corresponding author:
Sunita Sharma,
Assistant Professor, School of Health and Allied Sciences, Pokhara University,
Dhungepatan, Pokhara-30, Kaski, Nepal
Tel.: +977- 061504036
E-mail: sharmasunu789@gmail.com
ORCID ID:https://orcid.org/0000-0003-2015-3947

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ABSTRACT

Introduction: Growing stress and declining job satisfaction are the major challenges in nursing. Demographic and work-related factors may influence nurses' compassion satisfaction and fatigue levels. Therefore, the study examined the impact of demographic and occupational factors on nurses' professional quality of life.

Methods: A cross-sectional study was conducted on 172 nurses working in two tertiary care hospitals in Pokhara using proportionate stratified random sampling. Data was gathered using the Professional Quality of Life (ProQOL) scale version 5 in September 2019. SPSS was used for bivariate and multivariate analysis to determine a significant relationship between socio-demographic and work-related variables and three professional quality-of-life subscales. The ethical approval was taken from the Institutional Review Committee (IRC) of Pokhara University (Reference Number: 83-075-76).

Results: Most of the participants showed an average level of compassion satisfaction (79.1%, n=136), burnout (77.9%, n=134), and secondary traumatic stress (85.5%, n=147). The study revealed a significant mean difference between demographic characteristics (marital status and having children at home) and three professional quality of life subscales. Similarly, the study did not yield significant mean differences between the work-related variables and three professional quality-of-life subscales.

Conclusion: Nurses in tertiary care hospitals exhibited moderate to high levels of compassion satisfaction while experiencing moderate to low levels of burnout and secondary traumatic stress. Despite moderate to low levels of burnout and secondary traumatic stress, it is imperative to address these issues as they have the potential to lead to medical errors and compromise patient care standards.

Keywords: Burnout, Compassion satisfaction, Nurses, Secondary traumatic stress

Introduction

There is widespread concern for healthcare providers becoming prone to compassion fatigue or burnout (BO) and secondary traumatic stress (STS) due to the nature of their work.[1] Professional quality of life (ProQOL) encompasses attitudes and feelings of staff towards their job and is related to employee satisfaction. Nurses with positive professional QoL experience compassion satisfaction such as enthusiasm at work, positive attitude and resilience. Compassion fatigue (CF), on the other hand, refers to adverse effects on the professional quality of life, such as BO and STS.[2] Nurses who provide direct patient care in critical care units face most scenarios of compassion

fatigue.[3] BO has a detrimental impact on nurses because of stressful conditions, such as heavy workloads, staff shortages, or long shifts.[4] Similarly, STS results from BO experienced by nurses who suffer from highly stressful circumstances and heavy workloads.[5] Personal characteristics, such as nurses' empathy and attachment to their patients, could influence STS.[6] Exposure to high-stress environments, including those seen in tertiary care hospitals, emergency rooms, and care for the critically ill, can lead to secondary traumatic stress (STS) in those who work there for an extended period.[5,7,8]

Few studies have been conducted recently in Nepal focusing on compassion satisfaction and fatigue (burnout and secondary traumatic stress) among nurses and other healthcare professionals. For example, a cross-sectional study was conducted among 230 nurses working in Chitwan Medical College and Teaching Hospital using professional quality of life (ProQOL). The study categorized the subscales of professional quality of life into three levels such as high, moderate and low. The study revealed that most nurses experienced moderate compassion satisfaction, fatigue and burnout. In contrast, a high level of compassion satisfaction, fatigue and burnout were found among few nurses.[9] Similarly, a descriptive cross-sectional study was conducted among 174 Nepalese medical doctors working in different hospitals in Kathmandu using professional quality of life scale-5. The study found a moderate level of compassion satisfaction, burnout and secondary traumatic stress among medical doctors in Nepal.[10] Likewise, a cross-sectional study was conducted among 200 healthcare workers. The study revealed that the majority of healthcare workers experienced moderate levels of burnout.[11]

Similarly, existing studies on the professional quality of life among nurses have revealed that work-related factors may influence the quality of life among professionals. For example, a descriptive cross-sectional survey among inpatient units and outpatient clinics in a cancer center in the US reported that both compassion satisfaction and fatigue are related to the healthcare setting and the work environment.[12] Similarly, a study in China involving 669 oncology nurses found years of work experience to be the factor that influences the occurrence of compassion fatigue.[13] Additionally, certain demographic and work-related factors such as age, sex, marital status, seniority, years of experience, and shifts may be related to Compassion fatigue, Compassion satisfaction, and Burnout in pediatric and critical care nurses.[14] However, studies have been conducted with nurses working in critical care units and not in general units.[15-17] In addition, previous studies analyzing these factors do not determine precisely what socio-demographic and work-related variables may influence these syndromes, which are related to the work context to which nursing professionals are exposed.[18] Although studies have been conducted to measure compassion satisfaction and fatigue as a measure of professional quality of life, fewer studies have raised uncertainty in relation to the impact of nurses' socio-demographic and job-related characteristics in determining their compassion satisfaction and fatigue.[19] Moreover, the majority of attention is focused on compassion satisfaction and fatigue among other healthcare providers,[10] there is a paucity of literature on the issues of compassion satisfaction and fatigue among nurses in Nepal.[9-11,19,20] This study will offer a glimpse of this pervasive, pressing issue in the context of Nepal. Therefore, this study aimed to examine nurses' compassion satisfaction and burnout and their association with socio-demographic and work-related variables.

Much of the prior literature has used concepts such as compassion satisfaction and fatigue to measure the professional quality of life (ProQOL). Compassion satisfaction (CS) has been defined as the positive aspects and pleasure a care provider gains despite exhaustion and hardship.[2,21] Further, compassion fatigue has been defined as emotional pain caused in some care providers when exposed to a suffering individual.[22] Additionally, fatigue is classified as burnout and secondary traumatic

stress. Along these lines, burnout has been described as a psychological, behavioral and physical state that ranges from feelings of exhaustion and fatigue to frustration and anger.[23] Similarly, secondary traumatic stress (STS) results from the exposure of the care provider to the suffering of others who have or are experiencing stressful events.[21] STS manifests in the care provider as feelings of fear, sleep difficulties, intrusive images, or avoiding reminders of traumatic experiences regarding the person for whom care was provided.[21]

Although a considerable number of studies[3-8] have examined the relationship between compassion satisfaction and fatigue in healthcare settings, however, the present study is based on the theoretical assumption that specific demographic and work-related characteristics nurses possess may influence their professional quality of life in terms of compassion satisfaction and fatigue (burnout and secondary traumatic stress).[12-19] Therefore, the study investigated the association between demographic and work-related factors with compassion satisfaction and fatigue.

Methods

A cross-sectional descriptive study was conducted using a proportionate stratified random sample of nurses working in various departments of two tertiary care hospitals in Pokhara: Western Regional Hospital (WRH) and Gandaki Medical College (GMC). Given a 95% confidence interval and a 0.5 margin of error,[24] a sample size of 166 was calculated using Raosoft sample size calculator (http://www.raosoft.com/samplesize.html) based on the total number of nurses working in the mentioned settings (approximately 291) also used by another study.[25,26] The study assumed a prevalence rate of 50% considering the previous study and a non-response rate of 20% of samples.[24,27] Therefore, the survey questionnaire was provided to a total sample size of 199; 172 responses were received at the end, with an adequate response rate of 86%.[28] The sample was selected according to the following inclusion criteria: staff nurses working in the selected hospitals and who are directly involved in patient care. The exclusion criteria were nurses working in outpatient settings.

Among the three tertiary hospitals of Pokhara, two hospitals were chosen purposively. Then, the entire population was divided into different strata. The strata were divided based on the general unit and special unit. The general unit included medicine, surgery, orthopedics, dialysis, gynecology, pediatrics, geriatric, and psychiatric wards. The special unit had an emergency, post-operative, intensive care unit, neonatal care unit, neonatal intensive care unit, and maternity ward. The sample was taken proportionately from each unit by simple random sampling with the help of the sampling frame. The nurses completed the Professional Quality of Life Scale (ProQOL version v) and a sociodemographic questionnaire.[29] The researcher used a two-part questionnaire structured as follows: the first section included sociodemographic and work-related characteristics. For the second section, an English version of the ProQOL scale version 5, a 30-item questionnaire on a 5-point Likert scale (ranging from 1 = never to 5 = very often), was used to measure ProQOL among nurses. The questionnaire consisted of three sets of 10 items that reflected specific measures on the ProQOL subscales: CS, BO, and STS. The total score of each subscale was interpreted as either high (≥42), moderate (23–41), or low (≤22).[29] In this study, the researcher evaluated the English version of the ProQOL questionnaire for internal consistency using Cronbach's alpha among a sample of 172 nurses. The alpha scale reliability of CS, BO, and STS is 0.88(SD=10), 0.75(SD=10), and 0.81(SD=10), respectively.[29] The present study calculated the instrument's reliability using Karl Pearson's correlation coefficient test by adopting the Split Half technique, obtained 0.80 for CS, 0.72 for BO, and 0.77 for STS. This indicated adequate levels of internal consistency and evidence of instrument reliability.[30,31]

Data were checked for completeness and correctness, then coded and entered into IBM SPSS software version 19. Categorical variables were

presented as frequencies and percentages. Continuous variables were presented as mean and standard deviations. The analysis was performed with a 95% confidence interval. Descriptive statistics are used to define the sample characteristics. The relationship between socio-demographic and work-related characteristics and ProQOL subscales and mean subscale scores were assessed by Independent Sample t-test, One way ANOVA and Regression analysis. A p-value <0.05 indicated a significant difference.

Ethical approval was obtained from the Institutional Review Board of Pokhara University (Ref. No.83-075-76). Confidentiality and anonymity were maintained, and no personal identifiers were requested from the participants. The data were collected personally, and the study aim was explained at the beginning of the survey. Additionally, participants were free to proceed with the questions or withdraw at any point during the survey. Informed consent was obtained from the participants before data collection in written form regarding their participation and publication of the study findings.

Results

The study obtained an 86.43% response rate, and of the total of 172 questionnaires returned from two tertiary care hospitals in Pokhara. Cronbach's α revealed good internal reliability for the subscales: compassion satisfaction α=0.80; burnout α=0.72 and secondary traumatic stress α=0.77. This indicated adequate levels of internal consistency and evidence of instrument reliability.[30,31]

Table 1 shows the sample socio-demographic characteristics of nurses. Out of 172, most respondents, 146(84.9%), were between 19-27 years, where the mean age was 24.6 years, the minimum age was 19 years, and the maximum age was 50. Nearly two-thirds of 112(65.1%) were unmarried, and only 30 (17.4%) lived with children. Similarly, 127(73.8%) of the respondent's educational level was proficiency certificate level (PCL) in Nursing, and only 45(26.2%) had their qualification of Bachelor and above.

Table 1: Socio-Demographic Characteristics of the Participants

Description	Frequency	Percentage (%)
Age (years): Mean =24.60, SD = 4.95, Range = 19–50		
19-27	146	84.8
28-35	18	10.5
36 and above	8	4.7
Marital Status		
Married	60	34.9
Unmarried	112	65.1
Live with Children		
Yes	30	17.4
No	142	82.6
Level of Education		
PCL Nursing	127	73.8
Bachelor and above	45	26.2

Table 2 depicts the work-related characteristics of the study participants. The sample comprised 87(50.6%) nurses working in general units and 85 (49.4%) working in special units. The majority, 95.9% (165) of the respondents, were staff nurses. Similarly, the majority, 141(82.0%), of the respondents had up to 5 years of working experience. The majority, 130 (75.6%), were temporary employees. More than half, 93(54.1%) of the respondents, had a monthly salary of up to 15,000.

Table 2: Work-related characteristics of the respondents

Variable	Frequency	Percentage (%)
Work Department		
General Unit	87	50.60%
Special Unit	85	49.40%
Work Position		
Ward In charge	7	4.10%
Staff Nurse	165	95.90%
Years of Experience		
Up to 5	141	82.0%
6 to 15	24	14.0%
16 and above	7	4.0%
Nature of Employment		
Permanent	42	24.4%
Temporary	130	75.6%
Income (in Rupees) per month		
Up to 15,000	93	54.1%
15,001-30,000	71	41.2%
30,001and above	8	4.7%

Table 3: Descriptive Statistics of Professional Quality of Life (ProQOL) Indicators (n=172)

ProQOL domain	Total Score	Min Score	Max Score	Mean ± SD	Mean percentage (%)
CS	50	24	48	37.12±4.97	74.24
BO	50	17	39	25.74±4.05	51.48
STS	50	17	39	26.96±4.43	53.92

SD= Standard Deviation, Min= Minimum, Max= Maximum

Table 3 above shows different aspects of professional quality of life of the 172 respondents. The total score of each subscale is 50. The minimum score on CS was 24, the maximum score was 48, and the mean was 37.12±4.97. The minimum score on burnout was 17, the maximum score was 39, and the mean was 25.74±4.05. The minimum score on Secondary traumatic stress (STS) was 17, whereas the maximum score was 39, and the mean was 26.96±4.43.

Table 4 below presents the frequency distribution of three professional quality-of-life indicators. The findings revealed that the majority, 136 (79.1%), of the respondents had an average level of compassion satisfaction (CS), and 36 (20.9%) had high compassion satisfaction. Similarly, the finding reveals that the majority, 134 (77.9%) of the respondents, had an average level of Burnout, and 38 (22.1%) of the respondents had low burnout. Finally, the results depict that the majority, 85.5% (147) of the respondents, had an average level of Secondary Traumatic Stress, and 14.5% (25) had low Secondary Traumatic Stress. Interestingly, none of the sample respondents has a low level of compassion satisfaction and a high level of burnout and secondary traumatic stress.

The ProQOL scale classifies the level of compassion satisfaction, burnout, and secondary traumatic scales into three categories. Scores lower than 22 represent a low level, 23 to 41 represent an average level, and scores greater than 42 represent a high level.

Table 4: Summary of the subscale frequencies

Subscales of Professional Quality of Life	Frequency	Percentage (%)
Level of Compassion Satisfaction		
Low (<22)	0	0%
Average (23-41)	136	79.1%
High (>42)	36	20.9%
Level of Burnout		
Low (<22)	38	22.1%
Average (23-41)	134	77.9%
High (>42)	0	0%
Level of Secondary Traumatic Stress		
Low (<22)	25	14.5%
Average (23-41)	147	85.5%
High (>42)	0	0%

Using an independent sample t-test in Table 5 below, a statistically significant mean difference was reported between demographic factors (marital status and living with children) with compassion satisfaction. However, no statistically significant mean difference was reported between the level of education and compassion satisfaction. The test results also indicated statistically significant mean differences between burnout and demographic factors (marital status and living with children). However, no significant mean differences were reported between burnout and other demographic factors (level of education). Additionally, no statistically significant differences were reported in the means of the demographic factors with secondary traumatic stress ($p > .05$). Furthermore, no statistically significant differences were reported when running one-way ANOVA for age with three subscales of professional quality of life ($p > .05$).

Table 5: Mean Differences Between Compassion Satisfaction, Burnout, and Secondary Traumatic Stress and Socio-demographic Variables

Characteristics	Categories	Compassion satisfaction		Burnout		Secondary traumatic Stress	
		M(SD)	*p*-value	M(SD)	*p*-value	M(SD)	*p*-value
Age	19-27	37.32(5.11)		25.66(4.17)		27.01(4.53)	
	28-35	37.06(3.59)	0.067	35.89(3.53)	0.704	26(2.83)	0.657
	36 and above	33.13(3.72)		26.88(3.18)		27.25(5.34)	
Marital Status	Married	35.61(5.03)	0.004***	27.15(4.58)	0.001***	27.33(4.34)	0.374
	Unmarried	37.87(4.78)		24.98(3.54)		26.70(4.46)	
Live with Children	Yes	34.65(5.17)	0.004***	27.13(4.32)	0.038**	26.68(4.26)	0.755
	No	37.59(4.80)		25.44(3.95)		26.97(4.46)	
Level of Education	PCL Nursing	36.99(4.96)	0.657	25.70(3.87)	0.872	27.15(4.45)	0.242
	Bachelors and above	37.37(5.04)		25.82(4.58)		26.25(4.29)	

*** denotes significance at 1 percent level and ** denotes significance at 5 percent level

Table 6 below depicts the mean difference between three subscales of professional quality of life (compassion satisfaction, burnout and secondary traumatic stress) with work-related variables. The independent sample t-test and one-way ANOVA results reported no statistically significant mean difference between the work-related variables and three professional quality of life subscales.

Table 6: Mean Differences Between Compassion Satisfaction, Burnout, and Secondary Traumatic Stress and Job-related Variables

Characteristics	Categories	Compassion satisfaction		Burnout		Secondary traumatic Stress	
		M(SD)	*p*-value	M(SD)	*p*-value	M(SD)	*p*-value
Work Experience	Up to 5 Years	37.49(4.94)		25.48(3.91)		26.99(4.36)	
	6-15 Years	35.42(4.51)	0.089	26.96(4.93)	0.209	27.30(4.85)	0.298
	16 Years and Above	35(6.30)		26.71(3.40)		24.43(3.95)	
Monthly Income	Up to Rs 15,000	37.29(5.05)		25.69(3.49)		27.51(4.38)	
	Rs15,001 - 30,000	36.99(4.99)	0.686	25.76(4.62)	0.957	26.07(4.34)	0.11
	Rs 30,001 and above	35.75(4.30)		26.13(5.33)		27.63(4.96)	
Work Department	General Unit	36.56(5.00)	0.167	25.80(4.07)	0.829	26.83(4.34)	0.796
	Special Unit	37.62(4.92)		25.67(4.06)		27.01(4.52)	
Work Position	Ward In charge	36.42(3.20)	0.719	26.42(4.23)	0.647	28.28(3.86)	0.407
	Staff Nurse	37.12(5.04)		25.70(4.06)		26.86(4.44)	
Nature of Employment	Permanent	35.95(5.25)	0.092	26.71(4.73)	0.073	26.09(4.03)	0.17
	Temporary	37.45(4.85)		25.42)3.78)		27.18(4.51)	

Discussion

This study examined the impact of demographic and occupational factors on nurses' professional quality of life. The findings revealed that more than half of the study participants, 136 (79.1%), reported having average CS. In comparison, nearly 36 (20.9%) reported having high CS, which indicates that more than half of the study participants were optimistic about helping others. They derived pleasure from doing their work. The findings are consistent with prior studies conducted in Australia where 49.7% of the nurses reported having an average CS,[32] and in a survey conducted among emergency nurses in the United States, (56.8%) had an average CS.[33] At the same time, the current result contradicts the findings of a study conducted in Durban, South Africa, where most respondents (55%) had a high CS.[34] The results also show that the majority (77.9%) of the nurses had an average level of burnout (BO). In a similar study conducted in the United States, (54.1%) had an intermediate level of BO and in a survey conducted in Australia (42.6%) had a medium level of BO, in another research conducted in South Africa (61.0%) had a medium level of BO.[32,33,35]

The study's findings revealed that most (85.5%) of the nurses had an average level of secondary traumatic stress. In a similar study conducted in Australia (54.4%) had an average STS[32], and in a study in South Africa, (75.0%) had an intermediate level of STS.[35] In contrast, research conducted in the United States reported that most nurses (65.9%) were in a low level of STS.[33]

The independent sample t-test results of the present study reported a statistically significant mean difference between demographic factors

(marital status and living with children) with compassion satisfaction, which is opposed to the result of the research conducted in Korea, where an association between marital status and burnout is shown but not with compassion satisfaction and STS.[36] The study conducted in Portugal showed no significant marital status differences with any of the three subscales of ProQOL,[37] which is similar to the present findings in the case of STS.

Furthermore, no statistically significant differences were reported when running one-way ANOVA for age with three subscales of professional quality of life ($p > .05$). In contrast, this finding showed that age was not significantly associated with BO and STS, which is opposed by the research conducted among cardiac physicians in Pakistan, where age is identified to have a significant association with BO and STS.[38] Likewise, a study conducted in the United States showed a statistical association between age and three subscales of ProQOL.[33] However, the findings of the present study is inconsistent with the prior findings of the study conducted in Korea,[36] and a study in Australia revealed that age is the influencing factor for nurses' compassion satisfaction.[32] Similarly, an independent sample t-test and one-way ANOVA results of the present study reported no statistically significant mean difference between the work-related variables and three professional quality of life subscales which is inconsistent with the study conducted in South Africa, revealing that years of experience, work department and work position influence the compassion satisfaction.[39]

Conclusions

The study concluded that compassion satisfaction was moderate to high, and burnout and secondary traumatic stress were moderate to low among nurses working in tertiary care hospitals. Although the burnout and secondary traumatic stress levels were moderate to low, they need to be addressed since they could result in medical errors and harm patient care standards. The nursing profession in Nepal would benefit from the improvement of factors associated with compassion satisfaction. Therefore, hospitals should create psychoeducational programs to aid professionals in overcoming obstacles to experiencing compassion satisfaction. Considering the study's limitations, such as its emphasis on the Pokhara Valley and the inclusion of only nurses, a more extensive, multifaceted study might provide more information on health professionals' ProQOL. Further investigation of health professionals' ProQOL and the quality of care they offer is also critical, opening the way for more systematic research and resolving concerns relevant to their ProQOL.

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