Professional Quality of Life and Patient Outcomes: Mediating Role of Missed Nursing Care

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Abstract

The purpose of the study is to examine the reason for adverse patient outcomes due to missed nursing care related to professional quality of life. The study has also explained the mediating effect of missed nursing care between professional quality of life and adverse patient outcomes. The research framework includes professional quality of life as an independent variable which comprises compassion satisfaction, compassion fatigue and burnout, missed nursing care as a mediator and adverse patient outcomes as a dependent variable. This cross sectional quantitative deductive research conducted among the nurses, convenient sampling method used for collecting data. Questionnaire selected for all the variables which studied in this research with appropriate likert scale. Population size was 411 which gives a sample size of 202 nurses. Results of the study revealed that missed nursing care mediates negative relation with compassion satisfaction and adverse patient outcomes, positive relation with compassion fatigue and adverse patient outcomes and furthermore positive relation between burnout and adverse patient outcomes. This research concluded that missed nursing care had mediating effects on adverse patient outcomes and professional quality of life. So it must be reduced to enhance positive patient outcomes. Moreover active learning, advanced skills courses should be held and proper monitoring of nurses activity and self reporting of missed nursing care and adverse patient events should be necessary.

Introduction

Globally, the omission of nursing care was a prevailing issue for the safety of patients and optimal nursing care for patients (Agency for Health Care Research and Quality 2019). In the past decade, researchers have been interested in fundamental essential nursing care along with the recognition of why the care is missed (Kitson, 2018). Rationing care is a term that also belongs to missed nursing care, but it is different in some aspects related to missed nursing care. The term rationing comprised a willingness, plan, and suitability to deny giving care to a patient (Habermann; Halvorsen et al., 2021).

Missed nursing care can have adverse effects on patients, leading to errors in medication administration, patient falls, hospital-acquired infections, bedsores, and readmissions (Recio-saucedo et al., 2018). Health care departments and policymakers are actively investigating the reasons behind the omission of nursing care due to its direct impact on patient outcomes (Ball et al., 2018). Current research highlights that the omission of nursing care is a crucial aspect linked to patient outcomes and nurse staffing (Griffiths et al., 2018). Several studies point to drug administration, patient ambulation, and oral care as the most frequently missed nursing care

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activities (Bragadóttir et al., 2017). In certain instances, patients' family members take on responsibilities such as feeding and mobilization in Turkey. In developed healthcare systems, it is recognized that patient attendants often play a role in caring for patients with Alzheimer's disease, schizophrenia, cancer, older individuals, and children (Hagedoorn et al., 2019). Patients prioritize healthcare quality, making missed nursing care a significant concern for both nurses and nursing leadership (Fitzpatrick, 2018). Nursing professional standards provide a framework for ethical decision-making (Sibandze et al., 2018). Research indicates that experienced nurses tend to have a better professional quality of life compared to novices (Kolthoff & Hickman, 2017). Previous studies have established connections between professional quality of life, work environment, and personal characteristics across various healthcare settings, including cancer nursing, psychiatric nursing, pediatric nursing, geriatric nursing, and induced abortion care (Galiana et al., 2017). The omission of nursing care is a noteworthy organizational outcome associated with both professional quality of life and patient safety concerns (Recio-Saucedo et al., 2018).

The significance of the study is for health care institution, for nurses and for patient as well by reducing omission of nursing care, improve the quality of life of professionals and reduce adverse patient events. This research contributes in identifying how the nurse contribute in missed nursing care and negative patient outcomes and professional quality of life and mediating effect of omission of care in between compassion satisfaction, compassion fatigue, burnout and adverse patient outcomes. (Labrague, L et al 2020). There is strong need to build a work place rules, regulations or ways to observe nurses work to reduced missed care and poor patient outcomes. Further, it is the responsibility of nurse manager to monitor their subordinates to promote health and patient protection through promoting transparency and role modeling to maintain higher standard of organization. Professional quality of life attained by reducing missed care which in response reduce poor patient outcomes.

Literature Review

Compassion satisfaction and missed nursing care

Med Pr. et al. (2021) highlighted the correlation between nurse job satisfaction and the level of nursing care provided to patients. Increased missed nursing care was associated with higher job dissatisfaction among nurses. Pearson (2018) explained that missed nursing care contributes to nurse guilt, emotional stress, and a sense of inadequacy in delivering standardized patient care. Moura et al. (2019) suggested that habitual nurses with poor norms, values, and internal perceptions are more prone to increased missed nursing care. McMullen et al. (2017) proposed that nurses prioritize patient safety, which in turn contributes to their job satisfaction. Additionally, Cho et al. (2020) added that missed nursing care tends to rise with increased workload and the simultaneous performance of multiple tasks, leading to poorer patient outcomes.

Compassion fatigue and missed nursing care

Stamm (2018) asserts that compassion fatigue negatively impacts care providers, stemming from both physical and emotional burdens. Salmond, Ames, Kamienski, Watkins, and Holly et al. (2017) elaborate on the prevalence of chronic fatigue, particularly among past generations. Wijdenes (2019) suggests that compassion fatigue in healthcare providers arises from experiencing secondary traumatic stress and burnout, rather than job satisfaction. Peters (2018) introduces the concept of compassion fatigue, associating it with energy depletion, tiredness, loss of power, physical complaints, irritability, an intent to leave the profession, and the provision of poor-quality care. Nolte, Downing, Temane, & Hastings-Tolsma (2017) emphasize the increasing awareness of

compassion fatigue over the past decades, a matter of significance given the global shortage of nursing professionals. Upton (2018) further reveals that compassion fatigue leads to poor job performance, impaired judgments, an increase in medication errors, and documentation mistakes, ultimately resulting in missed nursing care.

Burnout and missed nursing care

White, Aiken, & McHugh, 2019 assessed nurse burnout in nursing homes found a significant association with missed care. Mooney, Fetter, Gross, Rinehart, Lynch et, al., 2017 discussed that nurse emotional tolerance is impacted when exposed to chronic traumatic events that causes emotional unbalance The Harris Poll & American Society of Hospital Pharmacists in 2019 stated in the national survey that revealed that almost 75% of American are concerned about health care provider burnout and 80% feel fear due to the fact that care providers burn out diminishes the quality of care and threaten patient life.

Missed nursing care and adverse patient outcomes

Amorim-Lopes and Drach-Zahavy (2019) discuss the widespread issue of unfinished nursing care, commonly known as missed or partially completed nursing care, with adverse outcomes for patients, nurses, and healthcare organizations. Suhonen and Scott (2018) propose that missed nursing care is a prevalent problem in healthcare settings. Recio et al. (2018) establish a strong link between missed nursing care and various negative outcomes, including patient dissatisfaction, medication errors, urinary tract infections, patient falls, pressure sores, critical incidents, and patient readmissions. Liu et al. (2018) highlight the adverse consequences of missed nursing care, such as poor quality of patient care, reduced patient satisfaction, and overall adverse events. Park, Hanchett, and Ma (2018) emphasize that missed nursing care often leads to actual adverse events, impacting the quality of care and patient safety. Fealy et al. (2019), Recio-Saucedo (2017), and Villamin et al. (2018) conducted studies demonstrating that missed nursing care has concrete clinical outcomes, including compromised care delivery, medication errors, hospital-acquired infections (HAIs), patient falls, limited patient mobilization, bed sores, increased mortality, and decreased patient satisfaction scores. Zang et al. (2020) stress the importance of reducing the national reporting of adverse incidents related to missed nursing care to enhance the quality of care and patient well-being, as missed nursing care contributes to a decrease in errors of commission.

Missed Nursing mediates the relationship between compassion satisfaction and adverse patient events.

In 2018, Klein, Riggenbach-Hays, Sollenberger, Harney, and McGarvey et al. conducted a study among healthcare professionals, focusing on self-education to enhance compassion satisfaction and reduce burnout over time. Tubbs-Cooley et al. (2019) explained that addressing missed nursing care in the neonatal ICU involves reducing infection during invasive treatment, ensuring the six rights of medications, promoting oral feeding, and involving parents. Providing compassionate care helps patients feel at ease and comfortable despite their illness, contributing to increased quality of care and patient safety. Adams et al. (2019) emphasized the crucial role of unit managers' behavior in impacting staff well-being and enhancing the professional quality of life for nurses. Liu et al. (2018) highlighted the negative outcomes of missed nursing care, including poor patient care quality, safety issues, overall adverse events, and decreased patient satisfaction. Kim et al. (2018) elucidated that nurse manager support for frontline nurses plays a crucial role in reducing

missed nursing care activities. Boamah et al. (2018) underscored that leadership support increases job satisfaction and, consequently, reduces adverse patient outcomes..

Missed nursing care mediates the relationship between compassion fatigue and adverse patient outcomes.

Nolte et al. (2017) stated that compassion fatigue can significantly impact a person's professional ability to actively participate in their chosen profession. Upton et al. (2018) revealed that health workers experiencing compassion fatigue also contend with factors like burnout, apathy, a desire to leave the profession, decreased productivity rates, staff turnover, and an increased likelihood of making mistakes. Cramond, Fletcher, & Rehan (2017) emphasized the critical importance of preventing compassion fatigue to provide optimal patient care, acknowledging its inevitability in the nursing profession. Al Barmawi et al. (2018) suggested that managing compassion fatigue, secondary traumatic stress, and burnout involves similar strategies such as resilience, compassion, mindfulness, and self-care. Miller et al. (2018) recognized the need for professionals to protect themselves from compassion fatigue through successful coping and treatment measures. Sannino et al. discussed how inadequate managerial guidance and support often lead to moral distress.

Missed nursing care mediates the relationship between burnout and adverse patient events.

Butler et al. (2017) indicated that increased levels of self-care among trainees are associated with higher Compassion Satisfaction, mitigating the harmful effects of burnout and enhancing overall quality of life. Adams et al. (2019) stated that a significant contributor to nurse retention in hospitals is the quality of life. Hammig (2018) concluded that burnout, work-life imbalance, and quality of life are the primary reasons nurses leave the hospital or exit the profession. Pradas-Hernández et al. (2018) highlighted that the range of burnout in pediatric nurses is 21% to 39%, surpassing other departments. Knupp et al. (2018) suggested a link between lower exhaustion levels, greater manager support, and strong leadership skills leading to reduced burnout and improved professional quality of life. Duffy et al. and Smith et al. (2018) proposed that missed nursing care affects patient safety, contributes to poor patient outcomes, and increases healthcare system costs. Ball et al. (2018) concluded in their research that a 16% increase in mortality risk within 30 days of admission is associated with a 10% increase in reports of missed nursing care.

Methodology

Population and Sample Size

The population we have selected in the present study included all the nurses from the Punjab Institute of Neurosciences, Lahore (PINS). It included nurses from different departments such as emergency, ICU, operation theatre, neurosurgical wards, and neurology, comprising 411 nurses. The sample size was calculated using the Taro Yamane (Yamane, 1973).

The calculations are presented below.

$$n = \frac{N}{1 + N(e)^2}$$

In this formula n= Sample size; N= Total population; e=Precision level

$$n = \frac{411}{1 + 411(.05)^2}$$

As per calculations, the sample size of the present study is 202 nurses working in PINS, Lahore.

Questionnaire and Measurement

This section provides information on the questionnaire utilized for assessing the mediating role of missed nursing care in the relationship between professional quality of life and adverse patient outcomes. The questionnaire included items adapted from B. Hudnall Stamm's 2009 Professional Quality of Life: Compassion Satisfaction and Compassion Fatigue Version 5 to measure professional quality of life. Missed nursing care was assessed using items from the Missed Nursing Care Survey by Kalisch Williams (2009). Adverse patient outcomes were measured through items from the Caring Behaviors Inventory, a 42-item instrument reduced by Ying Wu et al., Nurs Res, Jan-Feb 2006. All measurements were evaluated on a 5-Likert scale, where 1 represented "never," 2 "rarely," 3 "sometimes," 4 "often," and 5 "very often."

Ethical Consideration

Everyone who took part in the study was made aware that there would be no compensation or gifts for their voluntary involvement. Additionally, they were not coerced into taking part in the study. The surveys were all created such that neither the researcher nor anyone else could determine the participant's identity (A complete secrecy of the data collected). The collected data was guaranteed to be utilized strictly for research purposes. Additionally, the Superior College of Nursing granted all relevant permissions.

Results

Demographic Profile of the Respondents

The study sample comprised 202 nurses from departments such as the Neurosurgery Ward, Neurology, ICU, Operation Theater, Emergency, and HDU. 126% of nurses of 21 to 30 years of age, 19% of nurses of 31 to 40 years of age, 25% of nurses of 41 to 50 years of age, 138% of nurses on morning duty, 16% were on evening and 16% were on night, 35.1% nurses performing duty in neurosurgery ward, 25.7% in neurology, 14.4% in emergency, 6.9% in HDU and 11.4% in operation theater, 16.8% had 10-12 years experience and 28.2% had 4-6years experience, 25.7% had 7-9 years experience, 16.3% had 1-3 years of their job, 12.9% had 12+ years experience. 42.1% of nurses had a diploma in general nursing, 39.1% had a post-RN degree, 5.4% had a generic degree, and 13.4% had a diploma in midwifery.

Table 1 Demorgaphic Variables

Demographic Variables	Categories	Frequency	Percentage
Age	21 to 30	82	40.6
	31 to 40	80	39.6
	41 to 50	37	18.3
	51 to 60	3	1.5
Qualification	diploma in midwifery	27	13.4
	diploma in general nursing	85	42.1
	Bscn	79	39.1
	Generic	11	5.4
Shift	Morning	28.2	28.2
	Evening	41.6	41.6
	Night	30.2	30.2
Experience	1 to 3 year	33	16.3
	4 to 6 year	57	28.2
	7 to 9 year	52	25.7

	10 to 12 year	34	16.8
	12+ year	26	12.9
Department	Neurosurgery Ward	71	35.1
	Neurology	52	25.7
	ICU	13	6.4
	Operation Theater	23	11.4
	Emergency	29	14.4
	HDU	14	6.9

Descriptive Statistics and Correlation

The following table 2 shows the descriptive statistics and correlation. As per the findings reported in table 2 mean values for the variables namely; compassion satisfaction, compassion fatigue, burnout, MNC and adverse patient outcomes were 4.1657, 2.8523, 3.7848, 2.9509 and 2.9386 respectively. Additionally the table also shows the values of skewness and kurtosis. Notably, all of the values for skewness and kurtosis ranged from +2 to -2 that establish the data normality. All of the variables were found to be significantly correlated.

Table 2 Descriptive Statistics and Correlation

	Mean	**SD**	CS	CF	BO	MNC	APO	**Skewness**	**Kurtosis**
CS	4.1657	.62962	1					-1.466	2.168
CF	2.8523	.86694	.747**	1				-.525	.245
BO	3.7848	.37499	.898**	.860**	1			-.281	.863
MNC	2.9509	.52479	.083	.450**	.329**	1		-.363	1.580
APO	2.9386	.77153	-.122	.450**	.582**	.582**	1	-.373	.208

Reliability and Validity

Cronbach's alpha was assessed to know the reliability of the data. As per the standard, the value of Cronbach's alpha should be greater than 0.7. As per the findings reported in Table 3 all the values of Cronbach's alpha are greater than 0.7 indicating reliability. Additionally, table 3 shows the validity of the constructs. KMO (Kaiser-Meyer-Olkin) Bartlett's test was performed. As per the parameters, the values of KMO for all the variables are greater than 0.5 and all the values are significant. Hence, both reliability and validity are established.

Table 3 Reliability and validity

Reliability			**Validity**			
Constructs	**Cronbach's alpha**	**Number of items**	**KMO**	**Approx. Chi-Square**	**df**	**Sig**
CS	.792	10	.500	771.761	1	.000
CF	.808	10	.555	476.721	55	.000
BO	.694	10	.727	819.169	280	.000
MNC	.755	24	.665	546.832	105	.000
APO	.617	5	.693	546.321	1	.000

Hypotheses Testing

The following table 4 shows the values for the path coefficients, and explained variance. As per the results of the study R2 for compassion satisfaction regarding adverse patient outcomes is valued at .3459, indicating that compassion satisfaction has captured the -10.2% variance in missed nursing care while it captured the 27.2% variance in adverse patient outcomes. Moreover, the table also shows the path coefficients for the relationship between the variables. As per the results reported in table 4, compassion satisfaction was found to negatively influence adverse patient outcomes. (β= -.102, t= -1.744, p=0.00) and compassion fatigue (β= .272, t=7.119, p=0.000) indicating that one unit increase in compassion fatigue will increase in adverse patient outcomes burnout found to positively influence adverse patient outcomes. (β= .461, t= 4.935, p=0.00) Additionally, the missed nursing care found to be a signification mediate between the professional quality of life and adverse patient outcomes (β= .856, t=10.129, p=0.00), so it is a significant mediator.

Table 4 Path Coefficients

Hypotheses	β	t value	p value	S/US	R^2
CS -> APO	-.102	-1.744	0.00	S	.3459
CF -> APO	.272	7.119	0.00	S	.202
BO->APO	.461	4.935	0.00	S	.109
PQOL -> MNC -> APO	.856	10.129	0.00	S	.3726

Discussion

This section focuses on the discussion of the study's findings, highlighting several key points. It explores the direct relationship between independent and dependent variables, starting with the direct association of professional quality of life with adverse patient outcomes. Subsequently, it examines the mediation of missed nursing care in the relationship between professional quality of life and adverse patient outcomes. The ensuing discussion on the acceptance or rejection of hypotheses is objective-based.

Improving professional quality of life has a positive impact on adverse patient outcomes, with a strong ability to control missed nursing care. The Canadian Nurses Association (2017) emphasized the core value of providing compassionate care in the nursing code of ethics. Yılmaz and Üstün (2018) defined compassion satisfaction as the joy derived from proper work and creating new life values. King, Linette, Donohue-Smith, et al. (2019) suggested patient satisfaction is influenced by nurses maintaining patient information confidentiality and timely completing patient medication, establishing a negative relationship between compassion satisfaction and adverse patient outcomes.

The CFAP in 2020 described compassion fatigue as a set of symptoms, not a disease, with Figley (2020) identifying symptoms like physical, emotional, and spiritual depletion resulting from chronic stress in working with those in pain and distress. Adimando et al. (2018) proposed that compassion fatigue negatively impacts those caring for others in various aspects of their personal and professional lives, establishing a positive relationship between compassion fatigue and adverse patient outcomes. Jha, Ilif, & Chaoui (2019) asserted that burnout among healthcare providers is a crisis and epidemic issue requiring national attention. Nurses, primarily focused on patient care, may underestimate the stress they endure and its impact on their well-being (Nolte et al., 2017), establishing a positive relationship between burnout and adverse patient outcomes.

Globally, nurse omission of care is termed a pandemic issue (Caldwell-Wright, 2019). Nurses, as the largest healthcare providers, play a vital role in patient care and reducing the omission of care (Bany et al., 2018). AHRQ Patient Safety Network (2019) defined adverse patient events as preventable harmful experiences leading to the omission of nursing care. The World Health Organization (2019) highlighted patient care and protection as a main concern, with nurses playing an essential role. Boamah et al. (2018) and Aiken et al. (2017) concluded that nursing assessment is a reliable measure for estimating negative patient incidents. Vizcaya-Moreno (2020) proposed that using the nursing process and interprofessional collaboration reduces missed nursing care and adverse events. Khatatbeh et al. (2021) suggested that supervisor involvement and support reduce harmful patient events, nosocomial infections, and medication errors. Consequently, missed nursing care significantly mediates the relationship between professional quality of life and adverse patient outcomes.

Conclusion

This research concluded that missed nursing care positively affected adverse patient outcomes. So, it must be reduced to enhance positive patient outcomes. Moreover, active learning and advanced skills courses should be held, and proper monitoring of nurses' activity and self-reporting of missed nursing care and adverse patient events should be necessary.

Limitations and Future Directions

Although all our hypotheses came true and all objectives were met, there are some limitations in the present study. The study is restricted to one hospital due to time limitations, and the study is cross-sectional, so data was collected at once. The longitudinal study gave multidimensional aspects, which the present study needs to include.

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