

Predictors of professional quality of life among nurses: A cross-sectional study



Cris S. Adolfo*

Department of Nursing, College of Applied Medical Sciences, Majmaah University, Majmaah, 11952, Saudi Arabia

ARTICLE INFO

Article history:

Received 5 July 2020

Received in revised form

11 September 2020

Accepted 13 September 2020

Keywords:

Burnout

Nurses

Practice environment

Professional quality of life

Stress

ABSTRACT

A good practice environment is a vital aspect of the staffing and retention of health care workers, especially of nurses affecting patient care. This study investigates the predictors of nurses' Professional Quality of Life working in public hospitals and private hospitals. A cross-sectional design was utilized, including 374 nurses conveniently sampling selected in two public hospitals and two private hospitals in the Philippines using a Practice Environment Scale of the Nursing Work Index and Professional Quality of Life scale having a good psychometric property, respectively. The overall mean score for practice environment for Nurses is at a low level, whereas the mean Professional Quality of Life score was at a moderate level. Age is significantly associated with the burnout subscale ($r=-0.119$, $p<0.021$) and with secondary traumatic stress ($r=-0.193$, $p<0.001$). Monthly salary is significantly associated with the compassion satisfaction subscale ($r=-0.140$, $p=0.007$) and STS ($r=0.107$, $p=0.038$). Meanwhile, the working hours' figure is significantly associated with compassion satisfaction subscale ($r=-0.133$, $p=0.010$). Finally, the practice environment of nurses shown is significantly associated with compassion satisfaction subscale ($r=-0.426$, $p=0.007$) and secondary traumatic stress ($r=0.524$, $p<0.001$). Filipino nurses have a lower practice environment and moderate professional quality of life. The predictors of the professional quality of life of nurses were age, monthly salary, working hours, and their practice environment. Specifically, the higher the salary and the shorter the working hours, the better their professional quality of life. Additionally, the poorer the practice environment, the lower the professional quality of life.

© 2020 The Authors. Published by IASE. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

In recent years, progressive improvement of the quality of the practice environment (PE) has played an integral part in ensuring both patient safety and the well-being of health care professionals (Lambrou et al., 2014). A positive PE is a vital aspect of the staffing and retention of health care workers, especially of nurses; it affects the quality of patient care (Lambrou et al., 2014). The PE in which nurses carry out their tasks and duties, collaborating with other health care workers in caring for patients, is called the professional PE (Lake, 2002). A positive PE is important for nurses and nursing administrators as it enables them to apply correct quality

assessment (Lambrou et al., 2014). According to the ANCC (2008), a good PE involves "working with other competent nurses, good nurse-physician relationships, nurse autonomy and accountability, supportive nurse managers and supervisors, control over nursing practice and work environment, support for education, research and evidence-based practice, adequate nurse staffing and high-quality patient care (ANCC, 2008). Furthermore, there is rising evidence showing a favorable PE leading to positive work satisfaction, lower burnout, and stress level.

Similarly, instituting positive PE in the clinical setting is of vital importance for ProQOL. Another study reported that nurses' perceptions of their PE are influenced their Professional Quality of Life (ProQOL), defined as satisfaction felt by nurses related to their profession (Stamm, 2010). If nurses are satisfied with their profession, they can provide a positive, safe working environment. Thus, optimal service towards clients' needs could be achieved. Hence, a safe PE optimal nursing care gives nurses

* Corresponding Author.

Email Address: c.adolfo@mu.edu.sa

<https://doi.org/10.21833/ijaas.2021.02.006>

Corresponding author's ORCID profile:

<https://orcid.org/0000-0003-4776-1512>

2313-626X/© 2020 The Authors. Published by IASE.

This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

ProQOL positively. According to Stamm (2010), ProQOL offers health care professionals stability between compassion satisfaction (the optimistic job role aspects) and compassion fatigue (the negative aspects, subdivided into burnout and secondary traumatic stress). ProQOL is important for both the carers and the recipients of care (Alshehry et al., 2019). Negative ProQOL among nurses induces negative attributes in the way patients are handled (Stamm, 2010). For example, if there is poor PE of nurses, nursing care is not optimal, nurses fail to recognize secondary traumatic stress symptoms, thus compromising nurse's ProQOL and quality of patient care (Alshehry et al., 2019). In the study of Lambrou et al. (2014), a positive PE can accomplish workers' individual needs by offering optimistic communication within physical and mental well-being. When the worker's needs were not met, they might experience work stress and burnout, which negatively affects the worker's job performance. Unhealthy PE for nurses can create "stressed, fatigued, unable to use their critical thinking skills," allowed for higher incidences of errors, failures, and injuries lead to their inability to protect their patients, which significantly affects their quality of work life.

Aside from PE, some demographic factors also affecting nurses ProQOL were also reported worldwide. For instance, one study in Korea found that nurses' ProQOL has shown that affecting nursing performance increase together with longer work experience, older nurses, a postgraduate education level (Han and Park, 2013). One study in Spain reported that nurses are at risk for negative ProQOL because of excessive workload and working environment (Gascon et al., 2013).

In another study, Latvian nurses reported that age, gender, length of service in occupation affect nurses' ProQOL (Circenis et al., 2013). A study among Korean nurses found that marital status, educational attainment, age, work experience, work position were influential factors of ProQOL (Kim et al., 2015). Therefore, positive reinforcement of the above-mentioned variables is needed to improve nurses' ProQOL.

The Philippines, like many other countries, faces challenges to the quality of PE; this affects ProQOL adversely among health care professionals, especially among nurses. Because of these challenges, the country has reformed its health service delivery and health regulation.

These reforms were mostly to address the healthcare system's deprived availability, inequity, and ineffectiveness (Romualdez, 2011). The country's health healthcare system is composed mainly of public hospitals and private hospitals. Private hospitals are the more expensive option tend to have better quality in health service because of the much better equipped and complete technology facilities.

Since of the expensive cost of private healthcare, the people who have low or no income address their health needs in public hospitals, which are free of the

hospital. Despite low health costs in public hospitals, it is a challenge for patients to receive necessary care because of less bed capacity, a high inflow of patients, a lack of nurse staffing. Above this, it resulted in poor PEs among nurses, which they are subjected to stress and may not be able to provide safe care. According to Dones et al. (2016), in addition, The Filipino Healthcare System is "fragmented," meaning that it has limited availability of basic health care so that the provision of patient treatment is also limited (Romualdez, 2011). It is, therefore, very likely that poor PE would affect nurses' ProQOL.

In modern health care development environments, the need for positive PE among nurses should be continually promoted, but nurses are most likely to experience a lower ProQOL, which can influence their PE negatively (Alshehry et al., 2019). While the nursing practice environment has been the focus of several studies, it has not been defined explicitly in the context of ProQOL (Velasco-Ferrer and Conde, 2015), and there has been no detailed investigation of the influence of PE on Filipino nurses and their ProQOL. Nurses with poor PEs at risk of burnout and secondary traumatic stress, which are components of ProQOL, causing diminished work productivity, decreased health wellbeing, and turn to higher turnover (Velasco-Ferrer and Conde, 2015). Meanwhile, improved PE is connected with reduced hospital mortality, a positive working environment promoting nurses' satisfaction, and better ProQOL (Tamayo et al., 2016). The Philippines is a major source of nurses employed overseas (Acevedo-Garcia and Almeida, 2012; Cheng, 2009), so it is important to know how Filipino nurses' PE affects their ProQOL. An examination of nurses' views of their PE and ProQOL will help to identify issues and problems and to propose ways to overcome them. Clarifying these associations could contribute valuable insight information for nursing administration in addressing the issue of ProQOL among nurses.

The aim of this study is to describe a nurse's perception of their practice environment and their professional quality of life. Additionally, it determines whether a nurse's practice environment and demographic variables predict the professional quality of life. The research questions are as follows:

1. What is the nurse's perception of their practice environment and their professional quality of life?
2. Is there an association between the nurse's practice environment and demographic characteristics towards their professional quality of life?

The hypothesis of this research are as follows:

1. Nurses' demographic characteristics positively affect their ProQOL.
2. Nurse's practice environment positively affects their ProQOL.

2. Materials and methods

2.1. Study design

The study used a cross-sectional design in order to determine whether the nurse's PE and its demographic variables influence ProQOL.

2.2. Sampling and data collection

The researchers collected from all nurses working from the four tertiary hospitals in Northern Philippines that were conveniently selected. These hospitals are all tertiary, and each has a bed capacity for 300 to 400 patients. These tertiary hospitals provide a full complement of services such as obstetrics, gynecology, pediatrics, surgery, general medicine, and psychiatry, with all the medical specialties and medico-surgical services represented.

To be included, a nurse had to: (1) be licensed, (2) have hospital experience at least six months, (3) working in public and private hospitals, and (4) consent to partake in the study. A total of 543 nurses working in working in public and private hospitals were invited to participate; 374 surveys were received completely (response rate=68.87%). This study was directed after receiving approval from the Ethics Review Committee of each health care institution (ERCHRB-2019-165). Next, the survey sent to each department was approved by each department's manager. Informed consent was implied by participation in the survey. Each survey also included a cover letter explaining the study purpose, the right to refuse to participate, and that participation implies consent. The confidentiality of the participants was protected by no identification of participants in the survey forms. The surveys were then distributed to each nursing staff member, along with a detailed cover letter. A blank manila envelope was left in the room for survey collection, and the researcher left the room while participants were filling out the surveys. Upon completion of the surveys, a selected member at the meeting would present the sealed manila envelope to the researcher. Survey collection started in September 2019 -December 2019.

2.3. Questionnaire

The self-administered questionnaire used to gather data from the respondents was made up of three sections:

- Demographic profile: This section contains the respondent's age, gender, marital status, the highest level of educational achievement, years of experience as a registered nurse, current hospital, monthly salary, hours worked per week, and hospital type.
- The practice environment scale of the nursing work index (PES-NWI): This 31-item scale

examines the workplace organizational characteristics using a 4-point Likert scale (1=strongly disagree; 4=strongly agree) (Lake, 2002). The researcher sought permission for the authors to use the survey tool and obtained approval via email. The scale constitutes measures five domains "collegial nurse-doctor relationships; nurse manager ability, leadership, and support of nurses; nursing foundations for quality of care; nurse participation in hospital affairs; and staffing and resource adequacy." The mean score was calculated from the item score, with a higher score indicating a perceived higher-quality practice environment (Lake, 2002). Specifically, domain scores at or above the midpoint of 2.5 indicate that domain as "favorable" or "positive" (Lake, 2002). The tool has displayed good have demonstrated excellent reliability and validity in hospitals worldwide such as Australia (Roche and Duffield, 2010), Cyprus (Efstathiou et al., 2018), Japan (Anzai et al., 2014), and Portugal (Ferreira and Martins, 2014). Each of the tool subscales satisfactory internal consistency (Ogata et al., 2018). In this study, Cronbach's alpha was 0.81.

- Professional Quality of Life (ProQOL): This tool assesses the feelings (positive and negative effects) of dealing with people experiencing tremendously traumatic events (Stamm, 2010). This tool is openly available for non-commercial and research purposes. The tool is composed of three different 10-item subscales (Compassion Satisfaction (CS) and Compassion fatigue (CF) composed of two subscales: Burnout (BO) and Secondary Traumatic Stress (STS). Items are rated on a 5-point scale (1=never to 5=very often). A summation of all scale items was used. For example, CS=summation items (3, 6, 12, 16, 18, 20, 22, 24, 27, 30). BO=summation items (1, 4, 8, 10, 15, 17, 19, 21, 26, 29). STS=summation items=(2, 5, 7, 9, 11, 13, 14, 23, 25, 28). Each category summation scores ranging from 10 to 50. For CS: $A \leq 22$ score means lower CS level; 23-41 denotes average levels, and ≥ 42 specifies high levels. For BO and STS: A score of ≤ 22 shows lower levels, 23-41 indicates average levels, and ≥ 42 reveals high levels of BO. The CS scale resulted in a Cronbach's alpha of 0.88, while the BO scale gave 0.75 and the STS scale 0.81 (Stamm, 2010). This scale has a good psychometric property and used internationally such as Australia (Heritage et al., 2018), Canada (Geoffrion et al., 2019), translated into several languages, such as Spanish version and Portuguese versions (Galiana et al., 2017), Iranian version (Hassan et al., 2019), and Hebrew version (Samson et al., 2016). In this study, the tool is remarkably reliable (CS subscale, $\alpha=0.81$; BS subscale, $\alpha=0.73$; STS subscales, $\alpha=0.76$).

2.4. Data analysis

The data were analyzed with SPSS version 25.0 software (SPSS Inc., Chicago, IL, USA). Descriptive statistics (i.e., mean, standard deviation, frequency,

and percentage) were used to analyze the demographic characteristics. To identify the association between nurse demographic characteristics and PE toward perceived ProQOL, an independent sample t-test, a one-way analysis of variance with posthoc Tukey HSD test, and a Pearson's product-moment correlation were conducted. All measures at interval or ratio level were normal distribution. A multivariate multiple regression analysis was conducted to analyze the multivariate effect of demographic and work-related characteristics and of PE toward perceived ProQOL. Multiple regression analyses were conducted to assess the relationship between the demographic and work-related characteristics and PE to their

perceived ProQOL. A p-value of <0.05 was considered significant.

3. Results

Table 1 shows the nurses' demographic characteristics. The average age of nurses was 27.19 years ($SD=6.22$). Most ($n=244$, 65.2%) were female, single ($n=296$, 79.1%), holders of bachelor's degrees ($n=340$, 90.9%), and working in a government hospital ($n=318$, 85%). The average monthly salary of nurses was 237.16 USD ($SD=160.285$), with 44.33 ($SD=6.650$) average working hours. Years of working in the present hospital ($M=4.04$, $SD=4.162$) and overall years as a nurse ($M=4.98$, $SD=4.35$) have similar mean scores.

Table 1: Nurses demographic characteristics (n=374)

Profile	Frequency	Percent	Mean	SD
Age			27.19	6.22
Gender:				
Male	130	34.8		
Female	244	65.2		
Marital Status				
Single	296	79.1		
Married	78	20.9		
Educational Attainment				
Bachelor's degree Graduate	340	90.9	1.09	0.28
Master Unit	34	9.1		
Years of working in the present hospital			4.04	4.16
Area of Practice				
Emergency room	62	16.6		
Out Patient Department	42	11.2		
Medical ward	118	31.6		
Surgical ward	14	3.7		
Intensive Care Unit	52	13.9	3.79	2.16
Operating Room	38	10.2		
Obstetric ward	22	5.9		
Dialysis department	14	3.7		
Pediatric ward	12	3.2		
Monthly Salary (USD)			237.16	160.28
Working Hours per week			44.33	6.65
Overall Years as a Nurse			4.98	4.30
Hospital Type				
Government	56	15.0		
Private	318	85.0		

The perceived PE of nurses is reflected in Table 2. The subscale PE was rank based on their respective mean; the highest mean score was rated as rank 1. The subscale "Staffing and Resource Adequacy (SRA)" was rated as rank 1 ($M=2.14$, $SD=0.60$), next subscale "Nurse Participation in Hospital Affairs (NPHA)" was rated as rank 2 ($M=1.99$, $SD=0.43$), then subscale "Nursing Foundation for Quality Care (NFQC)" was rated as rank 3 ($M=1.94$, $SD=0.41$), while subscale "Nurse Manager Ability, Leadership, and Support of Nurses (NMALSN)" was rated as rank

34 ($M=1.89$, $SD=0.45$). Lastly, the subscale "Collegial Nurse-Physician Relations (CNPR)" was rated as rank 5 ($M=1.79$, $SD=0.47$). The overall mean score for PE for Nurses is 1.93 ($SD=0.41$), which is interpreted as low PE. For ProQOL, the mean Compassion Satisfaction (CS) was 38.48 ($SD=5.27$), followed by Secondary Traumatic Stress (STS) ($M=32.38$, $SD=7.50$) and the Burnout (BO) subscale ($M=27.05$, $SD=3.84$). The overall mean ProQOL score was 32.63 ($M=4.66$), which is interpreted as a moderate ProQOL (Table 3).

Table 2: Rank order, means standard deviation and meaning of perceived practice environment of nurses

subscale	Rank	Mean	Std. Deviation	Interpretation
Staffing and Resource Adequacy (SRA)	1	2.14	0.60	Low PE
Nurse Participation in Hospital Affairs (NPHA)	2	1.95	0.43	Low PE
Nursing Foundation for Quality Care (NFQC)	3	1.94	0.41	Low PE
Nurse Manager Ability, Leadership, and Support of Nurses (NMALSN)	4	1.89	0.45	Low PE
Collegial Nurse-Physician Relations (CNPR)	5	1.79	0.47	Low PE
Overall		1.93	0.41	Low PE

The association between nurses' demographic characteristics and the PE toward ProQOL is shown

in Table 4. The assumption test score of all measures at interval or ratio level were normal distribution.

Age is significantly associated with the burnout subscale ($r=-0.119$, $p=0.021$) and with STC ($r=-0.193$, $p<0.001$). Monthly salary is significantly associated with the compassion satisfaction subscale ($r=-0.140$, $p=0.007$) and secondary traumatic stress ($r=0.107$, $p=0.038$). Meanwhile, the working hours are

significantly associated with compassion satisfaction subscale ($r=-0.133$, $p=0.010$). Finally, the PE of nurses shown is significantly associated with compassion satisfaction subscale ($r=-0.426$, $p=0.007$) and secondary traumatic stress ($r=0.524$, $p<0.001$).

Table 3: Nurses perceived professional quality of life

Subscales	Mean	Std. Deviation	Interpretation
Compassion Satisfaction (CS)	38.48	5.27	Good deal of professional satisfaction
Burnout (BO)	27.05	3.84	Average burnout.
Secondary Traumatic Stress (STS)	32.38	7.50	Low STS
Overall	32.63	4.66	Moderate ProQOL

Table 4: Association between the nurse's demographic characteristics, practice environment for nurses, and professional quality of life (n=374)

Characteristics	Mean±SD	Compassion Satisfaction (CS)		Burnout (BO)		Secondary Traumatic Stress (STS)	
		Statistics	P-value	Statistics	P-value	Statistics	P-value
Age	27.19±6.222	r=0.03	0.532	r=-0.11	0.021*	r=-0.19	0.000**
Gender							
Male	33.32±5.01	t=2.32	0.54	t=0.08	0.87	t=1.94	0.645
Female	32.30±4.49						
		Marital Status					
Single	32.47±5.59	t=-1.911	0.021*	t=0.08	0.29	t=-1.18	0.39
Married	33.26±5.26						
		Educational Attainment					
Bachelor's degree	32.39±5.48	t=-3.996	0.122	t=-1.890	0.006	t=-2.540	0.075
Master's degree	35.01±5.38						
Years of experience	4.04±4.16	r=0.095	0.065	r=0.01	0.879	r=-0.044	0.39
Monthly Salary	237±160.85	r=0.140	0.007*	r=0.97	0.062	r=0.107	0.04*
Working Hours (per week)	44.33±6.65	r=-0.133	0.010*	r=-0.05	0.312	r=-0.084	0.10
Total Years as a Nurse	4.98±4.30	r=0.06	0.211	r=-0.00	0.921	r=-0.124	0.03
		PE subscale					
Staffing and Resource Adequacy (SRA)	2.14±1.70	r=-0.04	0.753	r=-0.06	0.06	r=-0.52	0.53
Nurse Participation in Hospital Affairs (NPHA)	1.95±1.06	r=0.42	0.25	r=-0.057	0.17	r=-0.51	0.18
Nursing Foundation for Quality Care (NFQC)	1.94±1.01	r=-0.426	0.000**	r=-0.07	0.169	r=-0.524	0.000**
Nurse Manager Ability, Leadership, and Support of Nurses (NMALSN)	1.89±1.04	r=0.04	0.46	r=-0.07	0.154	r=0.06	0.10
Collegial Nurse-Physician Relations (CNPR)	1.79±0.68	r=-0.02	0.24	r=-0.073	0.54	r=0.04	0.15

Note: * $p < .05$ significances; ** $p < .000$ significance

Finally, **Table 5** describes the predictors of ProQOL among nurses using hierarchical regression. Age was identified as a significant predictor in the three-ProQOL subscale (i.e., Compassion Satisfaction, Burnout, and Secondary Traumatic Stress). The regression model was statistically significant, accounting for approximately 26.3% variance in Compassion Satisfaction ($R^2=0.263$; Adjusted $R^2=0.213$), about 17.9% variance in C burnout ($R^2=0.179$; Adjusted $R^2=0.179$) and, 35.3% variance in Secondary Traumatic Stress ($R^2=0.443$; Adjusted $R^2=0.418$). Consequently, for each 1 SD increase in age score, there is a corresponding 0.36 SD ($p<0.001$; Compassion Satisfaction), -0.283 SD ($p<0.001$; Burnout) and 0.242 SD ($p=p<0.001$; Secondary Traumatic Stress) increase in ProQOL score. For each 1 SD increase in monthly salary score, there is a corresponding -0.283 ($p=0.001$; Burnout) and -0.242 SD ($p=0.001$; Secondary Traumatic Stress) increase in ProQOL score. For each 1 SD increase in Working Hours score, there is a corresponding .265 ($p=0.007$; Burnout) and 0.290 SD ($p<0.001$; Secondary Traumatic Stress) increase in ProQOL score. Finally,

for each 1 SD increase in practice environment score, there is a corresponding .369 ($p=0.000$; Burnout) and 0.251 SD ($p<0.001$; Secondary Traumatic Stress) increase in ProQOL score.

4. Discussion

This study found that Filipino nurses perceive a low PE—the environments to which they are exposed are not always favorable to their practice. Their perceived PE is much lower than those found by studies in Japan (Ogata et al., 2018), Egypt (Mahran, 2017), and Europe (Leineweber et al., 2016), all of which used the same measuring tool. In the Philippines, unfavorable nursing PE has given rise to greater stress, fatigue, and inability to use critical thinking skills; it has engendered greater incidences of errors, failures, injuries, reported job dissatisfaction, and burnout at all job levels. According to Dones et al. (2016), lower PE may be due to inadequate professional development and inadequate numbers of competent staff. The Philippine health care environment faces significant

challenges from the nation's geography, susceptibility to natural disasters, and hospital

financing issues, all of which could lead to poor PE (Romualdez, 2011).

Table 5: Predictors of Pro QOL among nurses (n=374)

Variables	0.294 (0.263)					0.213 (0.179)					0.443(0.418)				
	Compassion Satisfaction					Burnout					Secondary Traumatic Stress				
	β	SE-b	Beta	t	p	β	SE-b	Beta	t	p	β	SE-b	Beta	t	p
Constant															
Age	45.39	3.85	0.36	11.782	.000**	23.117	2.959	-0.283	7.812	.000**	46.235	4.932	-0.242	9.375	.000**
Gender	-.520	.516	-.048	-1.008	.314	.430	.397	.055	1.085	.279	-.151	.661	-.010	-.228	.820
Marital Status	1.088	.762	.085	1.428	.154	.066	.585	.007	.113	.910	1.684	.975	.091	1.728	.085
Educational Attainment	2.212	1.151	.125	1.922	.055	1.002	.884	.078	1.134	.258	3.386	1.473	.132	2.298	.022
Years in the Area	-.174	.159	-.141	-1.096	.274	.001	.122	.001	.011	.992	-.033	.203	-.018	-.161	.872
Area of Practice	-.124	.116	-.052	-1.072	.285	-.102	.089	-.059	-1.147	.252	-.318	.148	-.093	-2.152	.032*
Monthly Salary	.030	.069	.036	.431	.667	-.169	.053	-.283	-3.206	.001*	-.286	.088	-.242	-3.253	.001*
Working Hours	.000	.000	-.176	1.897	.059	.000	.000	.265	2.706	.007*	.000	.000	.290	3.521	.000**
Total Years as a Nurse	-.091	.038	-.118	-2.384	.028	-.059	.029	-.106	-2.031	.058	-.187	.049	-.168	-3.829	.083
Hospital type	.085	.173	.071	.488	.626	.225	.133	.259	1.689	.092	.075	.222	.043	.337	.737
PES	2.822	3.428	.221	.823	.411	3.903	.845	.369	4.619	.000**	5.261	1.408	.251	3.735	.000**

Dependent variable: ProQOL. β: Unstandardized coefficients; SE-b: Standard error.
Note. *p<.05 significance; **p<.000 significance

This is congruent with the results of a previous study's findings that health care systems in developing countries are less likely than those in wealthier countries to receive effective health care PE (Hall et al., 2014). A positive PE ensures high-quality patient care and improves nurses' work motivation, performance, and well-being, as well as fostering a higher employee retention rate (Hall et al., 2014).

Explicitly, the Staffing and Resource Adequacy (SRA) PE subscale was rated the highest in this study. The cause could be the trend to increase the numbers of nursing schools all over the Philippines; this has contributed to the overproduction of nursing graduates. About 100,000 Filipino nurses were unemployed in November 2008; this appeared likely to increase by almost 50% in under two years, implying that the supply of nurses would become greater than demand in the health care setting. This is worth noting since a lack of staff resources and equipment has a negative influence on patient care quality and the performance of nurses. A lack of nursing staff gives rise to a heavy workload, burnout, and job stress, all of which can hinder proper patient care management; they can also lead to increased risk of inpatient complications and complaints (Hall et al., 2014).

The "Collegial Nurse-Physician Relations" PE subscale was rated the lowest of all the subscales. Possible explanations for this include the care workers' hierarchical relationship and differences in health care workers' communication styles or educational backgrounds. These differences could lead to misunderstandings of the nurse-physician relations role, lack of collegiality, or discomfort in working within the nurse-physician relationship (Wang et al., 2018). Failure to overcome these problems could have serious consequences for patient care and staff retention. A descriptive study by Wang et al. (2018) showed that a poor nurse-physician relationship inhibits teamwork, thus impacting patient care by affecting safety, efficiency, and accuracy. Leineweber et al. (2016) found that nurses who worked in environments with little or no collaboration had lower job satisfaction and greater intention to leave. Low nursing retention leads to the increased cost to the organization, as it has to recruit and train new nurses, as well as to a fractured team,

again leading to impaired patient outcomes and decreased satisfaction for both patients and staff (Leineweber et al., 2016). A lack of understanding of the nurse-physician relationship can also be a deterrent to the pursuit of advanced practice nursing. By embracing collaboration, long-term conflict resolutions can be achieved, and beneficial interpersonal relationships fostered (Wang et al., 2018).

Another important finding was that Filipino nurses perceived higher compassion satisfaction and lower burnout and secondary traumatic stress level. This finding broadly supports the one study conducted among 86 Australian nurses who work in the emergency unit and suggests that a higher prevalence of compassion satisfaction and greater ability to take care of those who suffer (O'Callaghan et al., 2020). Similar findings were also reported in another study conducted in Australia working in an ICU unit (O'Callaghan et al., 2020). It is consistently reported from empirical data nurses experiencing high compassion satisfaction levels have lower BO and STS scores (Stamm, 2010). On the other hand, if nurses reported higher burnout and secondary traumatic stress scores, then lower compassion satisfaction scores will be noted, leading to higher depression, anxiety levels (Duarte, 2017).

Overall, Filipino nurses perceived a higher moderate ProQOL. This finding is affirming to those in earlier findings in Portugal (Duarte, 2017), Latvia (Circenis et al., 2013), and South Africa (Wentzel and Brysiewicz, 2018), but slightly lower than that of one study in Korea (Kim et al., 2015). These variances could be credited to cultural and health care differences between the Philippines and other countries. According to the World Health Organization (WHO, 2007), the Filipino Healthcare System is "fragmented." This implies that basic medical care is unavailable in the entire country, as limited hospital number, inadequate treatments, and are insufficiently accessible for patients. In addition, as nurses constantly witness the suffering and pain of the patients, this supports the idea that nurses may be at particular risk of developing compassion fatigue. Thus, nurses may need to regulate their capability to sympathize with their patients so that their compassion does not impact their wellbeing.

This study revealed that the perceived ProQOL of nurses varies significantly according to age, monthly salary, working hours (per week), and PE. Age is significantly associated and is a predictor of ProQOL. Specifically, the result indicated that the older the nurses, the lower the BO and STS.

This is worth noting since younger employees might be new to the organizational environment, labor policies, interpersonal support, and even leadership and management in the workplace. It is also possible that younger employees are still learning to fit into their PE and adjusting (Geoffrion et al., 2019). It is also probable they might experience harsh working conditions and lesser autonomy compared to older employees (Galiana et al., 2017). In other studies, it was pointed out that older employees have higher social support from colleagues, greater control over one's job, and feedback than younger employees (Hsu, 2019). The study of Arteché et al. (2019) noted that when people grow older, they experience greater self-efficacy and have positive coping strategies experience which can help even in high-stress and burnout situations. This implies that working with older nurses and supervising them to the younger nurses would help maintain work engagement and lower stress and burnout. Nevertheless, the reasons for the differences between the younger and older nurses regarding the ProQOL was not extensively included in the study. Exploration about experiences of nurses regarding their ProQOL using qualitative study warrants further attention.

Overall, this finding reported a moderate ProQOL among nurses. Similar results were found in earlier studies in Korea (Kim et al., 2015), Spain, and Brazil (Galiana et al., 2017). At an average (27.19 ± 6.222) years of age, the Filipino nurses in the study were considered to be young adults; they had average CS and BO and STS. Nurses' ProQOL of life has an impact on patients' health (Stamm, 2010). The analyses of Duarte (2017) suggested that nurses are at risk of experiencing compassion fatigue but do not struggle with it and do not show as tough workers. According to Almazan et al. (2019), nursing is professed as a laborious, complicated, and very demanding profession; and there are many other responsibilities that could have negative consequences for nurses' ProQOL.

Monthly salary is significantly connected with the CS subscale and with STS; it is a significant predictor of ProQOL. The result is similar to those of previous researches by Heritage et al. (2018) and Galiana et al. (2017). However, the result differs from Bloomquist et al. (2015). This might be caused by differences in the monthly salary schemes. Nevertheless, a higher monthly salary represents higher compassion satisfaction and job ability, making the nurse enjoy helping others. Bloomquist et al. (2015) suggested that higher salaries and responsibilities made employees consider themselves more successful and gave them better job satisfaction. It is certain that higher salaries tend to increase work performance so that higher pay

often leads to greater work effort. In addition, higher monthly salaries make employees feel satisfied and fulfilled, with a greater chance to grow professionally.

The number of working hours is significantly associated with Compassion Satisfaction subscale and is a significant predictor of ProQOL. This result means that the longer nurses' working hours are, the poorer their ProQOL will be. Other empirical data support this finding (Kim et al., 2015). This study found the average working hours to be 44.33 hours, more than the 40 standard working hours of an average employee. According to Alamri and Almazan (2018), working more than 40 hours a week reduces productivity, leads to poor work performance, lowers work motivation, and creates a higher intention to leave. Almazan et al. (2019) reported that the risks or errors begin to increase when shift durations exceeded 40 hours. Working longer hours is also linked with poor mental health, increased anxiety levels, and depression (O'Callaghan et al., 2020). According to Villar (2017), overworked employees lose their productive ability and a higher chance to leave the current job workplace fulfillment. People working more than 40 hours per week are 60% experience more health problems than those working fewer than 40 hours (Villar, 2017). It is possible that working fewer than 40 hours also means fewer errors and less exhaustion amongst all levels of employees.

Finally, the PE Nursing Foundation for Quality Care (NFQC) subscale is significantly related, and a predictor of ProQOL. This might explain why a lower PE means a lower ProQOL. It is worth noting that a good PE ensures the safety of employees, can improve the emotions of staff, and aids them to enhance their mental and physical health, thereby increasing the sense of competence and job satisfaction (Lambrou et al., 2014). It also seems that an emphasis on the ability of nurses to make decisions and provision of facilities to improve their working conditions can improve their professional performance and increase job satisfaction, consequently increasing ProQOL (Duarte, 2017). However, a perception of the PE as stressful has a negative implication for nurses' ProQOL. This result is similar to empirical data showing that poor ProQOL is higher in hospitals with poor PEs, while hospitals with better and more favorable PEs have better ProQOL (Alshehry et al., 2019; Kim et al., 2015). PEs are venues that support work excellence, but a poor PE can result in higher intention to leave, lack of continuity of patient care, and poor ProQOL. A PE without its nurses' support to perform nursing care practice hinders good service delivery to patients (Choi et al., 2012). Nurses reported higher job satisfaction and higher ProQOL in hospitals with better PE (Dones et al., 2016).

The limitations of the study were collected in two public hospitals and two private hospitals in the Philippines. The study used self-reporting measurement by means of a questionnaire survey, resulting in desirability bias. Therefore, respondents

should be selected within their full understanding about the study, adding an option “no” or “undecided” or “I don’t know,” which gives them a more honest response than trying to fit their response into somewhat that doesn’t sit right. Also, the researcher wasn’t able to distinguish between demographic variable association (e.g., private and public hospital.) to ProQOL. Hence this a recommendation for further studies.

The use of cross-sectional design also limits the study, which does not offer a thoughtful understanding of whether the PE and ProQOL prevalence changes over time. Long-term studies could be explored in order to identify the relationship between nurses’ PE and the ProQOL on a follow-up basis. The majority of nurses work in a private hospital (15%) and a lower response rate, which also limits the generalization of results. In addition, only 4 hospitals were included in the study also limits the generalization of results. Therefore, a replication of such studies to other geographical areas in the country is warranted.

5. Conclusion

This study describes the nurse’s perception of their practice environment and their professional quality of life. Additionally, it determines whether the nurse’s practice environment predicts the professional quality of life. Filipino nurses have lower PE and moderate ProQOL. The ProQOL of nurses is associated with their age, monthly salary, working hours, and PE. Specifically, the higher the salary and the shorter the working hours, the better their ProQOL. In addition, the poorer the PE, the lower the ProQOL. The results provide precious visions and guidance for improving the PE of Filipino nurses as an important factor in influencing their ProQOL.

6. Implications for further research, policy, and practice

The study findings can be used to guide the creation of policies aimed at ensuring continuous PE development. These may include organizational initiatives such as shared goals, opportunities to learn, reward schemes, promotion in order to increase salary, and good relations between physicians and nurses. These factors all play a part in creating a healthy, staff-focused workplace. The development of strong, consistent teamwork, with such features as clear communication, respect, outlined responsibilities and process, and feedback meetings, will positively affect the team atmosphere and teamwork skills.

It is also suggested that increases in full-time employment and part-time employees’ reduction could provide a consistent workplace environment, and the opportunity to familiarize with colleague skills and strengths, continuity of patient care. Also, investing time and resources in nurses’ training to encourage an error-free culture within the

workplace. Next, leadership behaviors can contribute to a more positive PE by creating a stable, supported by the whole organization. Strong, evident leadership promotes staff unity, which is significant to avoid conflict, which leads to burnout, and stress reduced the overall wellbeing of nurses.

It is also recommended to purchase useful technology as well as better facilities and equipment, enabling the provision of patient care that meets safety standards (Circenis et al., 2013). Higher wages, better benefit packages (bonuses and loyalty pay), and better career opportunities could be added for effective ProQOL improvement. Finally, a reduction in working time to eight hours a day will create more opportunities for nurses to realize their potential in all manner of activities, including some within the work sphere. Therefore, improvement of PE, working hours’ balance, and higher salary could improve nurses’ ProQOL

Finally, future research regarding how to provide fair salary and job security affecting the ProQOL, and it may affect the performance of nurses, so that the management and the Human resources department must reconsider this issue. Examination of the impact of shorter working hours in relation to ProQOL could be warranted in the future their professional quality of life.

Compliance with ethical standards

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

References

- Acevedo-Garcia D and Almeida J (2012). Special issue introduction: Place, migration and health. *Social Science and Medicine* (1982), 75(12): 2055-2059. <https://doi.org/10.1016/j.socscimed.2012.09.008> PMID:23072818 PMCID:PMC3764998
- Alamri MS and Almazan JU (2018). Barriers of physical assessment skills among nursing students in Arab Peninsula. *International Journal of Health Sciences*, 12(3): 58-66.
- Almazan JU, Albougami AS, and Alamri MS (2019). Exploring nurses’ work-related stress in an acute care hospital in KSA. *Journal of Taibah University Medical Sciences*, 14(4): 376-382. <https://doi.org/10.1016/j.jtumed.2019.04.006> PMID:31488971 PMCID:PMC6717074
- Alshehry AS, Alquwez N, Almazan J, Namis IM, Moreno-Lacalle RC, and Cruz JP (2019). Workplace incivility and its influence on professional quality of life among nurses from multicultural background: A cross-sectional study. *Journal of Clinical Nursing*, 28(13-14): 2553-2564. <https://doi.org/10.1111/jocn.14840> PMID:30811737
- ANCC (2008). ANCC magnet recognition program. American Nurses Credentialing Center, Maryland, USA.
- Anzai E, Douglas C, and Bonner A (2014). Nursing practice environment, quality of care, and morale of hospital nurses in Japan. *Nursing and Health Sciences*, 16(2): 171-178. <https://doi.org/10.1111/nhs.12081> PMID:23855754
- Arteche DL, Almazan JU, and Adolfo CS (2019). Functional capability and job competence of part-time postretiree

- workers in higher academic institutions. *Ageing International*, 45: 305-314. <https://doi.org/10.1007/s12126-019-09357-7>
- Bloomquist KR, Wood L, Friedmeyer-Trainor K, and Kim HW (2015). Self-care and professional quality of life: Predictive factors among MSW practitioners. *Advances in Social Work*, 16(2): 292-311. <https://doi.org/10.18060/18760>
- Cheng MH (2009). The Philippines' health worker exodus. *The Lancet*, 373(9658): 111-112. [https://doi.org/10.1016/S0140-6736\(09\)60022-2](https://doi.org/10.1016/S0140-6736(09)60022-2)
- Choi J, Flynn L, and Aiken LH (2012). Nursing practice environment and registered nurses' job satisfaction in nursing homes. *The Gerontologist*, 52(4): 484-492. <https://doi.org/10.1093/geront/gnr101> **PMid:21908803 PMCID:PMC3409799**
- Circenis K, Millere I, and Deklava L (2013). Measuring the professional quality of life among Latvian nurses. *Procedia-Social and Behavioral Sciences*, 84: 1625-1629. <https://doi.org/10.1016/j.sbspro.2013.07.003>
- Dones LBP, Paguio JT, Bonito SR, Balabagno AO, and Pagsibigan JS (2016). Work environment of nurses in the Philippines: A preliminary study. *Philippine Journal of Nursing*, 86(2): 4-10.
- Duarte J (2017). Professional quality of life in nurses: Contribution for the validation of the Portuguese version of the Professional Quality of Life Scale-5 (ProQOL-5). *Análise Psicológica*, 35(4): 529-542. <https://doi.org/10.14417/ap.1260>
- Efstathiou G, Andreou C, Tsangari H, Dimitriadou M, and Papastavrou E (2018). Adaptation and validation of the Cyprus version of the practice environment scale of the nursing work index: A methodological study. *BMC Research Notes*, 11: 791. <https://doi.org/10.1186/s13104-018-3896-2> **PMid:30390712 PMCID:PMC6215668**
- Ferreira MRSDCF and Martins JPA (2014). Study of adaptation and validation of the practice environment scale of the nursing work index for the Portuguese reality. *Revista da Escola de Enfermagem da USP*, 48(4): 691-698. <https://doi.org/10.1590/S0080-623420140000400017>
- Galiana L, Arena F, Oliver A, Sansó N, and Benito E (2017). Compassion satisfaction, compassion fatigue, and burnout in Spain and Brazil: ProQOL validation and cross-cultural diagnosis. *Journal of Pain and Symptom Management*, 53(3): 598-604. <https://doi.org/10.1016/j.jpainsymman.2016.09.014> **PMid:28062348**
- Gascon S, Leiter MP, Andrés E, Santed MA, Pereira JP, Cunha MJ, and Martínez-Jarreta B (2013). The role of aggressions suffered by healthcare workers as predictors of burnout. *Journal of Clinical Nursing*, 22(21-22): 3120-3129. <https://doi.org/10.1111/j.1365-2702.2012.04255.x> **PMid:22978353**
- Geoffrion S, Lamothe J, Morizot J, and Giguère CÉ (2019). Construct validity of the professional quality of life (ProQOL) scale in a sample of child protection workers. *Journal of Traumatic Stress*, 32(4): 566-576. <https://doi.org/10.1002/jts.22410> **PMid:31265178 PMCID:PMC6771892**
- Hall CS, Fottrell E, Wilkinson S, and Byass P (2014). Assessing the impact of mHealth interventions in low-and middle-income countries-what has been shown to work? *Global Health Action*, 7(1): 25606. <https://doi.org/10.3402/gha.v7.25606> **PMid:25361730 PMCID:PMC4216389**
- Han Y and Park Y (2013). Effects of self-leadership and job involvement on clinical competence in general hospital nurses. *Journal of Korean Academy of Nursing Administration*, 19(4): 462-469. <https://doi.org/10.1111/jkana.2013.19.4.462>
- Hassan Kalhori S, Mohammadkhani S, Hasani J, Akbari M, and Moghadasin M (2019). Psychometric properties of the Persian version of professional quality of life scale among nurses. *The Horizon of Medical Sciences*, 25(2): 139-145.
- Heritage B, Rees CS, and Hegney DG (2018). The ProQOL-21: A revised version of the Professional Quality of Life (ProQOL) scale based on Rasch analysis. *PLoS One*, 13(2): e0193478. <https://doi.org/10.1371/journal.pone.0193478> **PMid:29489875 PMCID:PMC5831102**
- Hsu HC (2019). Age differences in work stress, exhaustion, well-being, and related factors from an ecological perspective. *International Journal of Environmental Research and Public Health*, 16(1): 50. <https://doi.org/10.3390/ijerph16010050> **PMid:30585250 PMCID:PMC6338997**
- Kim K, Han Y, Kwak Y, and Kim JS (2015). Professional quality of life and clinical competencies among Korean nurses. *Asian Nursing Research*, 9(3): 200-206. <https://doi.org/10.1016/j.anr.2015.03.002> **PMid:26412623**
- Lake ET (2002). Development of the practice environment scale of the nursing work index. *Research in Nursing and Health*, 25(3): 176-188. <https://doi.org/10.1002/nur.10032> **PMid:12015780**
- Lambrou P, Merkouris A, Middleton N, and Papastavrou E (2014). Nurses' perceptions of their professional practice environment in relation to job satisfaction: A review of quantitative studies. *Health Science Journal*, 8(3): 298-317.
- Leineweber C, Chungkham HS, Lindqvist R, Westerlund H, Runesdotter S, Alenius LS, and Tishelman C (2016). Nurses' practice environment and satisfaction with schedule flexibility is related to intention to leave due to dissatisfaction: A multi-country, multilevel study. *International Journal of Nursing Studies*, 58: 47-58. <https://doi.org/10.1016/j.ijnurstu.2016.02.003> **PMid:27087297**
- Mahrnan SMA (2017). Nurses practice environment and quality of patient care in Port Said hospitals. *Advanced Practice Nurse*, 2(3): 1000142.
- O'Callaghan EL, Lam L, Cant R, and Moss C (2020). Compassion satisfaction and compassion fatigue in Australian emergency nurses: A descriptive cross-sectional study. *International Emergency Nursing*, 48: 100785. <https://doi.org/10.1016/j.ienj.2019.06.008> **PMid:31331839**
- Ogata Y, Sasaki M, Yumoto Y, Yonekura Y, Nagano M, and Kanda K (2018). Reliability and validity of the practice environment scale of the nursing work index for Japanese hospital nurses. *Nursing Open*, 5(3): 362-369. <https://doi.org/10.1002/nop2.148> **PMid:30062030 PMCID:PMC6056431**
- Roche MA and Duffield CM (2010). A comparison of the nursing practice environment in mental health and medical-surgical settings. *Journal of Nursing Scholarship*, 42(2): 195-206. <https://doi.org/10.1111/j.1547-5069.2010.01348.x> **PMid:20618603**
- Romualdez AG (2011). The Philippines health system review. World Health Organization, Geneva, Switzerland.
- Samson T, Iecovich E, and Shvartzman P (2016). Psychometric characteristics of the Hebrew version of the Professional Quality-of-Life Scale. *Journal of Pain and Symptom Management*, 52(4): 575-581. <https://doi.org/10.1016/j.jpainsymman.2016.03.019> **PMid:27660084**
- Stamm BH (2010). The concise ProQOL manual. 2nd Edition, ProQOL.org, Pocatello, Idaho.
- Tamayo RLJ, Mugol HKL, Carabit QMM, Briones TJM, Aliwalas KAN, Andres ASD, and Tablang CMR (2016). Professional quality of life of staff nurses in the cancer institute of the Philippine General Hospital. *Journal of Oncology Navigation and Survivorship*, 7(9): 32-32.
- Velasco-Ferrer D and Conde A (2015). Nurse practice environment and quality of care in a multigenerational

workforce. *GSTF Journal of Nursing and Health Care (JNHC)*, 3: 138-146. https://doi.org/10.5176/2345-718X_3.1.102

Villar D (2017). What you need to know about the negative health effects of long work hours-HRM. Available online at: <https://www.hrmonline.com.au/performance/negative-health-effects-long-work-hours/>

Wang YY, Wan QQ, Lin F, Zhou WJ, and Shang SM (2018). Interventions to improve communication between nurses and physicians in the intensive care unit: An integrative literature review. *International Journal of Nursing Sciences*, 5(1): 81-88.

<https://doi.org/10.1016/j.ijnss.2017.09.007>
PMid:31406806 PMCID:PMC6626231

Wentzel DL and Brysiewicz P (2018). A survey of compassion satisfaction, burnout and compassion fatigue in nurses practicing in three oncology departments in Durban, South Africa. *International Journal of Africa Nursing Sciences*, 8: 82-86. <https://doi.org/10.1016/j.ijans.2018.03.004>

WHO (2007). *People at the centre of health care: Harmonizing mind and body, people and systems*. World Health Organization, Geneva, Switzerland.