Professional Quality of Life and Workplace Psychosocial Support Interventions among Nurses in the Philippines during the COVID-19 Pandemic

Johan Y. Castillejos,[1] Danica May O. Cañon,[1] Rupert I. Estor,[1] Marian Danille C. Santillan,[1] John Vian C. Villaluz,[1] Vivien Fe F. Fadrilan-Camacho, MD, MPH[1,2] and Paul Michael R. Hernandez, MD, MOH[1,2]

[1]College of Public Health, University of the Philippines Manila
[2]Department of Environmental and Occupational Health, College of Public Health, University of the Philippines Manila

ABSTRACT

Background and Objective. Nurses comprise the majority of the health workforce in the Philippines. Previous studies revealed that nurses manifest negative mental health outcomes exacerbated by COVID-19 pandemic. This study aims to determine the Professional Quality of Life (ProQOL) of nurses in the Philippines and their workplace psychosocial support interventions during the pandemic. The ProQOL measures compassion satisfaction (CS), burnout (BO), and secondary traumatic stress (STS).

Methods. A self-administered online questionnaire was disseminated by the Philippine Nurses Association, Inc. to affiliated nurses via email and Facebook posts. Out of 713 responses, 239 were eligible with their data analyzed using t-test, one-way ANOVA, and post hoc pairwise multiple comparisons.

Results. Respondents were found to have high CS (41.95 [SD 5.97]), moderate BO (23.56 [SD 6.07]), and moderate STS (26.62 [SD 8.18]). The most reported intervention was policies on confidentiality of workers' mental health (84.94%) while the least reported was community engagements under the hospital's mental health program (61.51%). ProQOL scores significantly differed in CS by age (p=0.011), position (p=0.044) and monthly income (p=0.016), BO by age (p=0.001) and years with current employer (p=0.009), and STS by region (p=0.017) and area of assignment (p=0.015). The existence of interventions yielded significant increase in CS and decrease in BO scores.

Conclusion. Nurses in the Philippines exhibit high and favorable ProQOL during the pandemic. The majority of respondents reported the presence of workplace interventions which yield significant differences in CS and BO. The findings highlight the importance of workplace psychosocial support interventions and the need to strengthen implementation.

Keywords: nurses, quality of life, psychosocial intervention, occupational health, COVID-19 pandemic

Paper presentation – 53rd Asia-Pacific Academic Consortium for Public Health, September 22, 2022, Marriot Grand Ballroom, Pasay City, Philippines.

eISSN 2094-9278 (Online)
Published: March 31, 2025
https://doi.org/10.47895/amp.v59i4.8704

Corresponding author: Johan Y. Castillejos
College of Public Health
University of the Philippines Manila
625 Pedro Gil St., Ermita, Manila 1000, Philippines
Email: jycastillejos@up.edu.ph
ORCiD: https://orcid.org/0009-0001-9643-5310

INTRODUCTION

First recorded in Wuhan, China, Coronavirus Disease 2019 (COVID-19) is a viral respiratory infection caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV-2).[1,2] As of 26 September 2021, there have been 231,416,600 confirmed cases of COVID-19 worldwide, including 4,741,330 recorded deaths.[3] On a similar date, a total of 2,490,858 cases were recorded in the Philippines, 37,405 of which led to death.[4]

The intensive and prompt healthcare response required in pandemic situations subjects healthcare workers to overwhelming situations.[5-8] A scoping review of 220 related articles conducted by Franklin and Gkiouleka[9] cited

psychological trauma and post-traumatic stress symptoms as common health outcomes due to COVID-19 response. Among all healthcare workers, nurses were conferred to have the highest risk of developing such mental health conditions during this pandemic.[6,10] Most commonly reported among frontline nurses include burnout, anxiety, depression, fear of stigma, and discrimination.[11]

In the Philippines, frontline healthcare workers experience unfair wages, lack of personal protective equipment (PPE), inadequate training, and lack of psychological and emotional interventions.[12] Stigma and discrimination were also evident in reports of harassment in the workplace and boarding houses.[13] The psychosocial impacts experienced by Filipino healthcare workers, specifically nurses, include dysfunctional levels of anxiety, decreased job satisfaction, and increased psychological distress.[14]

In the work context of health professionals, symptoms of anxiety, exhaustion, and stress brought by traumatic and complex situations are described as compassion fatigue (CF).[15-17]

Stamm divides CF into two parts[18]: burnout (BO) and secondary traumatic stress (STS). Burnout refers to feelings of hopelessness and difficulties in dealing with work, while secondary traumatic stress cites work-related, secondary exposure to extremely stressful events. Compassion fatigue, along with compassion satisfaction (CS), defines the professional quality of life (ProQOL) in workers.[19-21]

Compassion satisfaction, unlike CF, is a positive aspect of ProQOL and a protective factor derived from the pleasure of doing well in work, satisfaction in relationship with colleagues, and contribution to greater good of society.[16,18] Overall, ProQOL measures the quality one feels in work as impacted by professional well-being and performance.[22]

Recent studies have utilized ProQOL to measure the impact of COVID-19 on the CF and CS of healthcare workers. Healthcare professionals in Spain experienced moderate to high levels of CF and BO.[20] In Italy, frontline workers reported higher CS than second-line workers, attributable to more gratification and a deeper sense of personal success after treating COVID-19 patients.[23,24]

In the Philippines, however, available data on the ProQOL of nurses were collected pre-COVID-19 pandemic. General medical-surgical nurses experienced moderate to high levels of CS, BO, and STS.[25] Oncology nurses were reported to have moderate levels of CS, BO, and STS[26], which concurs with the study by Adolfo[27] wherein Filipino nurses working in four tertiary hospitals in northern Philippines generally have moderate ProQOL. With the overwhelming impact of COVID-19 in the country, these pre-pandemic ProQOL status are projected to worsen.

To combat the negative effects of the current health crisis on the professional well-being of healthcare workers, WHO recommends provision of instructions and training to workers on the protection of mental health and psychological well-being.[28] A study among Filipino nurses asserts that those who perceived higher organizational and social support were more likely to experience lower COVID-19-related anxiety, emphasizing the need for organizational measures such as psychological and mental support services.[14] More importantly, the role of policymakers is essential to provide enhanced variety of support to healthcare workers.[10]

Policies on the psychosocial support interventions in public and private sectors in the Philippines are implemented by the Civil Service Commission (CSC) and Department of Labor and Employment (DOLE), respectively.[29,30] Both regulatory agencies have provided guidelines on the implementation of mental health programs and policies in the workplaces, including those in the hospital settings.[29,30] These guidelines are pursuant to the Mental Health Act 2018,[29] which aims to enhance the delivery of integrated mental health services in the country. While these policies are in place even before the pandemic, there is no available study yet that examines the status of implementation of the aforementioned CSC and DOLE guidelines, along with the lack of literature on the ProQOL status of Filipino nurses during the COVID-19 pandemic.

OBJECTIVES

This study aimed to determine the professional quality of life (ProQOL) of nurses in the Philippines and the psychosocial support interventions existing in their workplaces during the COVID-19 pandemic. Specifically, it aimed to:

1. Determine the professional quality of life (ProQOL), specifically the mean scores and the prevalence of low, moderate, and high levels of compassion satisfaction, burnout, and secondary traumatic stress among nurses in the Philippines during the COVID-19 pandemic;
2. Determine the proportion of nurses that reported mandatory psychosocial support interventions in their workplaces during the COVID-19 pandemic;
3. Compare the mean scores of compassion satisfaction, burnout, and secondary traumatic stress according to: (a) demographic and employment characteristics, and (b) existence of psychosocial support interventions in the workplace as reported by nurses.

MATERIALS AND METHODS

Research Design

The study used a cross-sectional, descriptive research design.

Study Area

The study gathered nurse-respondents from all over the Philippines via the administration of an online survey through Google Forms. The study duration was five months which started in September 2021 and ended in January 2021.

Study Population

The target population were registered nurses in the Philippines and the study or sample population were registered nurses who are members of the Philippine Nurses Association, Inc. (PNA). The PNA was founded on September 2, 1922 as the Filipino Nurses Association. They are affiliated with the International Federation of Nurses and the World Health Organization. As of 2021, they have 40,000 members.[31] The study focused solely on PNA-affiliated nurses due to limitations of the self-administered survey in verifying if a respondent is a registered nurse in the country. This was also to utilize the channels of the PNA in disseminating information within their organization.

Respondents were eligible to participate in the study if they are a graduate of Bachelor of Science in Nursing, a registered nurse under the Professional Regulation Commission, and a member of the PNA. The participant should also be employed in a hospital in the Philippines in the last 30 days, to match the prescribed time frame of the ProQOL scale. Additionally, nurses who are on-leave in the last 30 days or nurses who are pregnant were excluded from the study.

Respondents were screened using the self-administered questionnaire. Those who have answered 'Yes' to all questions have fulfilled the eligibility criteria and were allowed to proceed with the survey.

Sampling Design

The study used voluntary response sampling. People volunteer themselves to be the participants of a study, usually by responding to a public online survey. It is similar to convenience sampling, as both are based on ease of access.[32] A survey form was sent to all members of the PNA via email. The link to the survey was also posted on the Facebook page of the PNA, Facebook groups related to nursing, and on the personal Facebook accounts of the study proponents. Email recipients and Facebook viewers had the option to volunteer themselves into the study by responding to the survey. The respondents were filtered, through the use of the inclusion and exclusion criteria, to fulfill the eligibility criteria and address the biases possibly brought about by the non-probability sampling. Participants who did not reply within one month were not included in the study.

Sample Size

OpenEpi was used in determining the sample size of the study. The anticipated proportion for Specific Objective (SO) 1 was obtained from the study of Ortega-Galan et al.[85] For SO1, the minimum sample size required to obtain an anticipated proportion of 48% with a confidence level of 95% and a margin of error of 5% was 430.[33] For SO2, a minimum sample size of 431 was required to estimate a default anticipated proportion of 50% with the same confidence level and margin of error. For SO3, the minimum sample size required is 306 to ensure that the confidence interval estimate of the mean score was within 5 units of the true mean, as noted from Craigie et al.[86] Since the estimation for SO2 yielded the maximum sample size estimate, the minimum sample size that was considered for the study was 431. An inflation factor of 13% was used to account for non-response due to voluntary response sampling design.[14]

Data Collection

A self-administered questionnaire containing seven sections was used for data collection to measure the ProQOL and the workplace psychosocial support interventions. The questionnaire was divided into seven sections to facilitate easier responses and minimize survey fatigue.

The first three sections of the questionnaire are the Introduction, Eligibility Criteria, and the Informed Consent Form. These are aimed at giving an overview about the study, filtering the prospective respondents based on the eligibility criteria, and ensuring their informed consent in participating in the study, respectively.

The fourth section of the questionnaire collected demographic and employment information of the respondent, specifically the age, sex, monthly income, region, city or municipality, years of clinical experience as a Registered Nurse, years with current employer or hospital, hospital ownership, COVID-19 referral hospital status, position, area of assignment, daily working hours, reporting days per week, and time of shift.

The fifth section of the questionnaire is the ProQOL Scale, a 30-item tool used to measure the positive (compassion satisfaction) and negative (compassion fatigue) aspects of helping others who experience suffering and trauma as part of one's job. Since 1995, there have been several revisions of the ProQOL, with the latest being the ProQOL Version 5 developed by Stamm.[18] The ProQOL has three discrete sub-scales namely compassion satisfaction, burnout, and secondary traumatic stress, that do not yield a composite score. It makes use of a five-point Likert scale ranging from 1 (Never) to 5 (Very Often). Points for questions under each subscale are totaled and interpreted as low (22 or less), moderate (between 23 and 41), and high (42 or more). Items in the ProQOL are positively- (15 of 30 items) and negatively-worded (15 of 30 items). Interpretation of the ProQOL can be done individually per subscale or in combination. The ProQOL 5 has acceptable construct and internal validity with a Cronbach's alpha of 0.77 to 0.89.[18] It was found to be reliable by previous studies and has already been used to assess the quality of life of nurses.[25-27,34,35]

The sixth section is the Workplace Psychosocial Support Interventions Questionnaire (WPSIQ), a dichotomous questionnaire which assesses whether mental health programs are existing in the workplace or not. Initially, questions were drafted based on the provisions stated in the Civil Service Commission Memorandum Circular No. 4, s. 2020, pertaining to the Mental Health Program in the Public Sector, and in the Department of Labor and Employment

Order No. 2018, s. 2020 referring to the Guidelines for the Implementation of Mental Health Workplace Policies and Programs for the Private Sector.[29,30] To identify those relevant to hospital settings, the questions underwent screening pursuant to the World Health Organization (WHO) COVID-19: Occupational Health and Safety for Health Workers Interim Guidelines, and Philippine Department of Health (DOH) Interim Guidelines on COVID-19 Referral Hospitals.[28,36] The questions identified to be appropriate to hospital settings comprised the WPSIQ.

The seventh or final section of the questionnaire is the Webinar Registration Form. As an incentive for participating in the study, a registration link was provided for respondents who were interested to attend the webinar entitled "Wellness for a WellNURSE: A Psychosocial Wellness Webinar for Nurses in the COVID-19 Pandemic". All respondents, including those who did not qualify with the study's eligibility criteria, were able to access this section.

Google Forms was used as the platform to administer the questionnaire online, which was set to require a response on each field ensuring that there will be no missing or incomplete data. This survey was pre-tested on 10 registered nurses, selected via convenience sampling, after the study protocol was approved by the UP Manila Research Ethics Board. The survey form was revised according to the pre-test findings in order to control for survey fatigue.

Data Processing and Analysis

Responses encoded through Google Forms were extracted into a masterdata in Microsoft Excel spreadsheet format. The data was processed using EpiInfo version 7. Statistical data analysis was done using OpenEpi version 3.01, and R version 4.1.1. Interpretation of the ProQOL scores followed the prescribed procedures of "The Concise ProQOL Manual" by Stamm.[18] Descriptive statistics was employed in generating frequency distributions and estimating mean (SD). The proportion of low, moderate, and high levels for each subscale and the proportion of respondents who experienced psychosocial support intervention in the workplace were calculated. Shapiro-Wilk test for normality was used to determine if a continuous variable of interest has a normal distribution. To compare the means of a normally distributed variable between two independent groups, independent or unpaired t test was used. If a continuous variable is not normally distributed, the Mann-Whitney-Wilcoxon test was used to compare the differences between two groups. Comparison of mean across three groups utilized one way ANOVA provided Bartlett's test ensured equality of variance. Otherwise, Kruskal Wallis was used. All tests were done with 95% confidence level. Scheffe's test was employed to perform post-hoc pairwise multiple comparisons after yielding the result of One-Way ANOVA, while Dunn's test was used after Kruskal-Wallis test.

Ethical Considerations

The research protocol was approved by the University of the Philippines Manila Research Ethics Board (UPMREB). Conduct of the research adhered to the ethical guidelines specified in the National Ethical Guidelines for Health and Health-Related Research 2017.

RESULTS

Shown in Figure 1 is the flowchart of respondents included in the study. Out of the 713 respondents who answered the survey in Google Forms, 250 fulfilled the study's eligibility criteria. After data screening, including the removal of duplicate responses and incorrect entries, a total of 239 responses were subjected to further data analysis.

The demographic and employment characteristics of the respondents are shown in Table 1. Among the 239 eligible respondents, most of them were 31 to 35 years old (43.51%), females (71.13%), and almost half of the respondents (49.37%) had a monthly income of 21,915 to 43,828 pesos. All 17 regions of the Philippines were represented in the survey, with the National Capital Region having the greatest number of respondents among the regions (17.99%). Among the respondents, 26.78%, 28.87%, and 24.27% had less than or equal to five years, six to 10 years, and 11-15 years of clinical experience as a Registered Nurse, respectively. However, it was noted that almost half of them have been working with their current employers or hospitals for five years or less (44.35%). More than half of the respondents

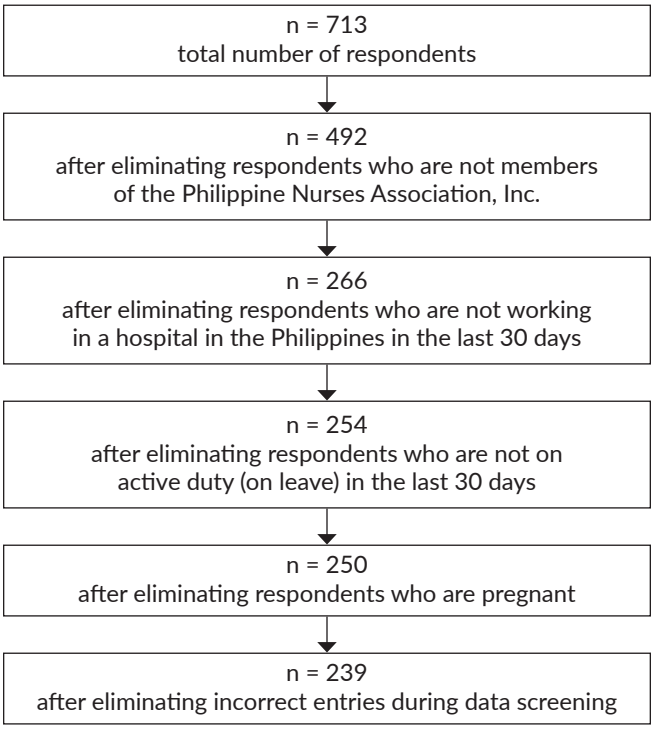

Figure 1. Flowchart of respondents included in the study.

work in government-owned hospitals (65.69%), COVID-19 referral hospitals (85.36%), and are staff nurses (69.87%). The respondents had different areas of assignment, with Internal Medicine having the greatest number of respondents (21.34%). Approximately half of the respondents worked eight hours a day (51.46%), had five working days in a week (54.39%), and had rotating shifts (58.16%).

Table 1. Demographic and Employment Characteristics of Nurse-respondents, Philippines, 2021 (n=239)

Characteristic	Number	Percentage (%)
Age		
≤25	9	3.77
26-30	33	13.81
31-35	104	43.51
36-40	31	12.97
41-45	17	7.11
≥46	45	18.83
Sex		
Male	69	28.87
Female	170	71.13
Monthly Income, in PhP		
Less than 10,957	15	6.28
10,957 to 21,914	80	33.47
21,915 to 43,828	118	49.37
43,829 to 76,699	23	9.62
76,700 to 131,484	1	0.42
131,485 to 219,140	0	0.00
More than 219,140	2	0.84
Region		
National Capital Region (NCR)	43	17.99
Cordillera Administrative Region (CAR)	9	3.77
Ilocos Region (Region I)	22	9.21
Cagayan Valley (Region II)	8	3.35
Central Luzon (Region III)	9	3.77
CALABARZON (Region IV-A)	25	10.46
MIMAROPA (Region IV-B)	2	0.84
Bicol Region (Region V)	25	10.46
Western Visayas (Region VI)	22	9.21
Central Visayas (Region VII)	12	5.02
Eastern Visayas (Region VIII)	10	4.18
Zamboanga Peninsula (Region IX)	4	1.67
Northern Mindanao (Region X)	11	4.60
Davao Region (Region XI)	24	10.04
SOCCSKSARGEN (Region XII)	4	1.67
Caraga (Region XIII)	6	2.51
Bangsamoro (BARMM)	3	1.26
Years of clinical experience as Registered Nurse		
≤5	64	26.78
6-10	69	28.87
11-15	58	24.27
16-20	19	7.95
≥21	29	12.13
Years with current employer or hospital		
≤5	106	44.35
6-10	61	25.52
11-15	35	14.64
16-20	18	7.53
≥21	19	7.95
Hospital ownership		
Government	157	65.69
Private	82	34.31
COVID-19 Referral Hospital		
Yes	204	85.36
No	35	14.64
Position		
Supervisor	36	15.06
Head Nurse	31	12.97
Clinical Nurse Specialist	5	2.09
Staff Nurse	167	69.87
Area of Assignment		
Outpatient Department	15	6.28
Pay and PhilHealth	4	1.67
Obstetrics and Gynecology	13	5.44
Surgery	6	2.51
Internal Medicine	51	21.34
Pediatrics	10	4.18
Emergency Room	34	14.23
Operating Room	20	8.37
Intensive and Critical Care Unit	21	8.79
Delivery Room	3	1.26
Hemodialysis Unit	16	6.69
Infection Control	19	7.95
Central Supply Department	3	1.26
Health Education and Promotion	7	2.93
Quality Assurance	17	7.11
Daily Working Hours		
8 hours	123	51.46
10 hours	8	3.35
12 hours	97	40.59
More than 12 hours	11	4.60
Reporting Days per Week		
2	3	1.26
3	19	7.95
4	56	23.43
5	130	54.39
6	22	9.21
7	9	3.77
Time of Shift		
Morning Shift	91	38.08
Afternoon Shift	3	1.26
Evening Shift	6	2.51
Rotating Shift	139	58.16

Table 2. Means and Prevalence of Low, Moderate, and High Levels of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress among Nurses in the Philippines during the COVID-19 Pandemic, 2021

Professional Quality of Life (ProQOL)		n	%
Compassion Satisfaction Mean=41.95 (SD=5.97)	Low	0	0.00
	Moderate	112	46.86
	High	127	53.14
Burnout Mean=23.56 (SD=6.07)	Low	100	41.84
	Moderate	139	58.16
	High	0	0.00
Secondary Traumatic Stress Mean=26.62 (SD=8.18)	Low	73	30.54
	Moderate	155	64.85
	High	11	4.60

n – frequency, % – percentage, SD – standard deviation

Table 3. Proportion of Nurses in the Philippines that Reported Mandatory Psychosocial Support Interventions in the Workplace during the COVID-19 Pandemic, 2021

Psychosocial Support Intervention	Yes		No	
	n	%	n	%
Policies on confidentiality of worker's mental health	203	84.94	36	15.06
Non-discriminatory policies and practices	193	80.75	46	19.25
Work accommodation and support programs	191	79.92	48	20.08
Mental health awareness/ education programs	180	75.31	59	24.69
Mental health services for treatment and referrals	168	70.29	71	29.71
Mental wellness activities	168	70.29	71	29.71
Physical wellness activities	168	70.29	71	29.71
Community engagements under the hospital's mental health program	147	61.51	92	38.49

n – frequency, % – percentage

The means and prevalence of low, moderate, and high levels of the three ProQOL subscales are shown in Table 2. Based on the mean scores, respondents were found to have high compassion satisfaction, moderate burnout, and moderate secondary traumatic stress. In terms of prevalence, nurses reported moderate to high levels of CS, low to moderate levels of BO, and low to high levels of STS. More than half of the respondents had high CS (53.14%), moderate BO (58.16%), and moderate STS (64.85%). None of the study subjects were found to have low CS and high BO.

As presented in Table 3, the majority of respondents reported the presence of psychosocial support interventions in their workplaces. The most common reported intervention pertains to policies on confidentiality of workers' mental health (84.94%). The least reported intervention was community engagements under the hospital's mental health program (61.51%).

Table 4 shows the p-values of the compared means of compassion satisfaction, burnout, and secondary traumatic stress according to socio-demographic factors identified in the study.

The one-way ANOVA found that at least one of the mean scores were found to be different from the rest in terms of CS by age group, BO by years with current employer, and STS by area of assignment. Scheffe's Test revealed that the difference of nurses' CS scores between participants who are 26 to 30 years old and those who are 46 years old and above have statistical significance (p=0.021).

Non-parametric Kruskal-Wallis test revealed significant differences in scores of BO by age group, CS by monthly income, STS by region, and CS by position. Dunn's Test showed no significant pairwise differences in CS scores by position and STS scores by region. The BO scores of those that are 46 years old and above differed significantly from the 26 to 30 (p=0.001), 31 to 35 (p=0.012), and 36 to 40 (p=0.021) cohorts. Additionally, the difference in CS scores between nurses from the 10,957 to 21,914 monthly income subgroup and the 43,828 to 76,699 subgroup was found to be statistically significant (p=0.032).

Table 5 shows the p-values of the compared means of compassion satisfaction, burnout, and secondary traumatic stress of nurses in the Philippines according to the self-reported existence of eight psychosocial support interventions in the workplace. The comparison of the average compassion satisfaction scores among nurses shows that those who reported the existence of interventions, except for mental health awareness and education programs (p=0.115),

Table 4. Comparison of Means of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress of Nurses in the Philippines according to Demographic and Employment Characteristics, 2021

Characteristic	CS	BO	STS
	p-value		
Age	0.011	0.001	0.061
Sex	0.278	0.349	0.144
Monthly Income	0.016	0.092	0.330
Region	0.311	0.664	0.017
Years of clinical experience as a Registered Nurse	0.187	0.062	0.663
Years with current employer or hospital	0.193	0.009	0.099
Hospital Ownership	0.276	0.218	0.097
COVID-19 Referral Hospital	0.644	0.244	0.079
Position	0.044	0.153	0.199
Area of Assignment	0.051	0.177	0.015
Daily Working Hours	0.338	0.652	0.579
Reporting Days per Week	0.630	0.425	0.318
Time of Shift	0.131	0.110	0.103

CS – Compassion Satisfaction, BO – Burnout, STS – Secondary Traumatic Stress

Table 5. Comparison of Means of Compassion Satisfaction, Burnout, and Secondary Traumatic Stress of Nurses in the Philippines according to the Existence of Psychosocial Support Interventions in the Workplace, 2021

Characteristic	CS	BO	STS
	p-value		
Mental health awareness/education programs	0.115	0.028	0.587
Physical wellness activities	<0.001	<0.001	0.176
Mental wellness activities	0.002	<0.001	0.120
Community engagements under the hospital's mental health program	0.021	0.001	0.090
Mental health services for treatment and referrals	0.037	0.034	0.713
Work accommodation and support programs	0.001	0.001	0.360
Non-discriminatory policies	0.001	0.001	0.115
Policies on confidentiality of worker's mental health	0.013	0.039	0.327

CS – Compassion Satisfaction, BO – Burnout, STS – Secondary Traumatic Stress

registered significantly higher compassion satisfaction scores than those who did not. In terms of burnout scores, there was significant difference in the scores in all eight interventions, wherein higher burnout scores were obtained from those who reported the absence of the psychosocial support interventions. In contrast, scores for secondary traumatic stress showed no significant difference in all interventions.

DISCUSSION

Results showed that Filipino nurses have high CS, moderate BO, and moderate STS. The highest reported intervention was policies on confidentiality of workers' mental health while the lowest reported was community engagements under the hospital's mental health program. ProQOL scores significantly differed in CS by age, position and monthly income, BO by age and years with current employer, and STS by region and area of assignment. The existence of interventions yielded significant increase in CS and decrease in BO scores. The target sample size was not reached posing limitations on generalizability. While statistically significant differences were found, these may be undermined due to methodological issues and the lack of power from insufficient sample size. The results were compared to published related studies to provide possible explanations for the study findings.

ProQOL of Philippine Nurses During the COVID-19 Pandemic

Nurses in the Philippines experience high compassion satisfaction, moderate burnout, and moderate secondary traumatic stress, based on the means of scores determined by the present study. According to Stamm,[18] scoring on the higher range of the CS subscale indicates that these nurses greatly derive professional satisfaction from their line of work. They foster positive feelings about their capability to be an effective nurse as indicated by BO scores on the lower range. Meanwhile, the majority of nurses in the study do not face a considerable deal of fear or trauma resulting from their work. Overall, nurses exhibit a positive and high professional quality of life despite the apparent exacerbation of work stressors and mental health problems caused by the COVID-19 pandemic.[9,18,37,38]

Globally, the findings of the present study on the ProQOL concur with similar studies among nurses conducted during the pandemic. Moderate to high CS, low to moderate BO, and low to high STS were also reported among nurses in Wuhan, China and Saudi Arabia.[39,40] Meanwhile, the observed means of scores on all three subscales are comparable to another study administered in China, Spain, and Ecuador.[41-43] The means of CS and BO were both comparable to that of Italian nurses as reported by Buselli et al,[23] but STS was found to be worse in the present study. CS and STS means were comparable to two studies organized in Iran,[44,45] however BO was found to be lower in the present study. The similarities in findings may be linked to circumstances relating to the COVID-19 pandemic, considering that all these countries were impacted by the ongoing health crisis.[46] Meanwhile, the minor variations in ProQOL scores may be attributed to the differences in the quality of pandemic response by country, and the time of data collection with respect to the pandemic timeline. Studies conducted in countries with better pandemic response and during later stages of the pandemic may present better ProQOL findings than those done during the early or peak stages given the advancements in information and control measures.[43]

In the Philippine setting, the present study reported better ProQOL scores among Filipino nurses during the pandemic as opposed to pre-pandemic counterparts. The prevalence of moderate to high scores was found to be higher in terms of CS (100% vs. 90.09%) and lower in terms of BO (58.16% vs. 74.38%) and STS (69.45% vs. 83.47%) compared to nurses from five secondary and tertiary government hospitals in Manila, Philippines studied in 2017.[25] Additionally, the present study's findings show that the means of CS, BO, and STS were observed to be better than nurses from four tertiary hospitals in Northern Philippines.[27] Interestingly, this observed improvement of ProQOL compared to pre-pandemic levels is unanticipated as Zhou et al.[41] found that nurses from Wuhan, China had higher CS and lower BO and STS during the pandemic than previous studies conducted in China and other countries during periods without emerging infectious diseases. Furthermore, Labrague and delos Santos already established that Filipino nurses faced negative mental health outcomes during the pandemic,[14,47] hence poor ProQOL was to be expected in the same period.

The contrast in the aforementioned details is interesting to explore further. First, the present study was conducted more than a year after the official start of the pandemic

in March 2020. It should be acknowledged that the early stages of the pandemic were the most difficult for frontline healthcare workers, especially nurses, given the sudden influx of COVID-19 patients and the healthcare system reaching critical levels in terms of capacity.[12] Since then, there have been positive developments in the health crisis situation. The improvements in vaccination status, staffing ratio, and patient workloads have a beneficial impact on mental health as observed among 255 frontline clinical nurses from hospitals in the Philippines during the pandemic.[48] Hence, better mental health outcomes compared to the early stages of the pandemic may be expected given these positive developments.[43] Second, the observed high CS and low BO during the pandemic may be attributed to the collective effort of healthcare workers and the immense public support for frontliners, making them perceive less the weight of their suffering.[23] This is reflective of the Bayanihan spirit of Filipinos wherein various forms of assistance were given to frontline COVID-19 healthcare workers to help alleviate the difficulties of their jobs.[49-51] Third, it should be noted from the previous section that there was insufficient evidence to support that working in a COVID-19 referral hospital would yield differences in scores across the three ProQOL subscales. Although it is possible that this may be due to insufficient sample size, it may also suggest that there may be other factors aside from exposure to COVID-19 cases which contribute to the favorable ProQOL scores. Finally, it is notable that guidelines on the implementation of mandatory mental health policies in the workplace were issued in early 2020 and were absent at the time pre-pandemic ProQOL studies in the Philippines were conducted. Previous studies have shown that nurses with organizational wellness programs and policies had better ProQOL scores both pre-pandemic and during the pandemic.[52-56] Moreover, nurses in the present study with workplace psychosocial support interventions have better ProQOL scores than those without. These suggest that the observed positive ProQOL may be attributed to the time of data collection, the support extended to frontliners, and the existence of psychosocial support interventions in the workplace.

Workplace Mental Health Interventions

The study showed that the majority of respondents self-reported the presence of psychosocial support interventions in the workplace. This is in accordance with the guidelines of DOLE's Department Order No. 208 and CSC's Memorandum Circular No. 04 both issued in 2020, which are derived from the Mental Health Act of 2018.[29,30,57] However, it can be noticed that these guidelines were implemented coincidentally with the surge of COVID-19 cases in the country. Previously, there are mental health and psychosocial support (MHPSS) programs in the Philippines that were usually enforced during times of calamities and disasters.[58] Recently, MHPSS programs have also been incorporated in public health responses directed towards the COVID-19 pandemic but are usually targeted towards patients and relatives of those that acquired COVID-19.[59]

Policies on confidentiality of worker's mental health were observed to be the most present psychosocial support intervention in the workplace. There are no strict laws regarding mental health but employees' information is protected under Republic Act 10173, also known as the Data Privacy Act of 2012. There is also the prevalent stigma against people suffering from mental health problems due to direct association of loss of face with seeking and receiving psychological help among Filipinos.[60] People deliberately conceal their mental health condition from coworkers and friends out of fear of being stigmatized which makes confidentiality a necessity in workplace settings.[61] This finding is related to the second most prevalent intervention as reported in the present study in which non-discriminatory policies and practices are promoted. Interventions targeted not just for the general public but also for health professionals are necessary to reduce stigma and to promote a positive workplace not just for nurses but for all employees.[62]

Community engagements under the hospital's mental health program is the lowest self-reported psychosocial support intervention. This can be attributed to the general view of Filipinos towards mental health. Aside from the lack of specific laws addressing this, cultural traits such as the view of mental health issues as a family disease as well as downplaying the severity of mental health problems and its impact on a person's daily life played a huge role in the struggle to implement programs addressing mental health as a community, as opposed to individual treatment.[63] Filipinos have also romanticized the concept of resilience, which prevents them from seeking help and to open up to others. This is however only explored in qualitative studies.[64]

ProQOL According to Demographic and Employment Characteristics

Significant differences in CS and BO were observed in different age groups. Participants who were 46 years old and above had significantly higher CS scores than participants who were 26 to 30 years old. A study by Sacco et al.[21] with comparable studies suggest that this may be due to the increased experience of older age groups, which make them more prepared to cope with challenges faced in the workplace. Inversely, participants who were 46 years old and above had significantly lower BO scores than participants who were in the 26 to 30, 31 to 35, and 36 to 40 age groups. According to a study by Merk in 2018, higher burnout scores from younger nurses may be due to experiencing harsher working environments and less workplace autonomy.[65] Additionally, nurses in the younger age groups may still be adjusting to their current work environment and are still trying to establish a workplace social support system.[27] The difference of the CS scores of nurses from the 10,957 to 21,914 Php monthly income subgroup and that of nurses from the 43,829 to 76,699 Php monthly income subgroup is statistically

significant, with a more favorable CS score from those in the higher monthly income subgroup. This is comparable to a study from South Ethiopia that found monthly income as a predictor for quality of work life with a lower income group experiencing a lower quality of work life.[66] A study from the Philippines also found a significant association between monthly salary and compassion satisfaction, with CS increasing as the monthly salary increases. This may be due to higher salary leading to increased work performance as well as greater sense of responsibility, job satisfaction, and fulfillment.[27] However, this is in contrast to a study by Balinbin et al.,[25] where higher monthly income was found to positively affect burnout and secondary stress instead of compassion satisfaction. Their study suggests that this may be due to the increased job demands and expectations that come with increased salary.

The results of the study showed that there was insufficient evidence to support that there are significant differences between the ProQOL mean scores between nurses working in COVID referral hospitals and those who are not. This may be due to the present study not being able to reach the minimum sample size requirement. A study in Thailand also found that nurses who were directly involved in caring for COVID-19 patients did not have significantly different ProQOL scores from those who were involved in related care only. However, the said study attributed it to the novelty of the disease, since it was conducted during the early stages of the pandemic,[67] which is not the case for the present study. Moreover, another study conducted in Sweden saw that as the pandemic progressed, camaraderie and harmony among the HCWs became stronger and empathetic healthcare managers helped in improving the mental health of the HCWs.[68] Considering the fact that the data collection for the study was conducted during the later period of the fourth wave of COVID-19 in the Philippines,[69] this may be the reason why there are favorable ProQOL outcomes for both COVID and non-COVID referral hospitals.

Although significant pairwise differences were not found for the CS scores by position, BO scores by years with current employer, and STS scores by area of assignment or by region due to the lack of statistical power, related studies may provide insight on the possible differences between the said variables. A study by Merk[65] in 2018 found that the compassion fatigue (CF) scores of nurses that were assigned to Emergency Work were higher than those assigned to areas such as Medical, Surgical, Perioperative, and Ambulatory units. Nurses in the frontline showed higher CS scores in a major university hospital in Italy.[23] This study suggested that this may be due to frontline nurses and physicians directly experiencing and observing the results of their treatment. In a study done in Saudi Arabia by Inocian et al.,[40] the position of a nurse was found to be a significant predictor of CS with staff nurses getting a lower score than the nurses with managerial positions. This study also mentions leadership as a positive factor for improved quality of work life. A study in Iran showed that nurses with 20 or more years of experience showed more favorable BO scores than those with 6 to 10 years of experience.[70] Factors such as nurses eventually adapting to their current work through time, as well as nurses eventually leaving work they are unsatisfied with are mentioned as possible influences to this result. No studies that determine the effect of the different regions on the STS of the respondents were found. However, it is known that nurses who experience higher workload are more likely to have STS.[71] Since the regions have varying workload due to the different nurse to population ratios in the regions,[72] it can be said that regions with higher workload should have had higher STS scores.

ProQOL According to Workplace Psychosocial Interventions

This cross-sectional study sought to compare the scores of compassion satisfaction, burnout, and secondary traumatic stress according to the existence of psychosocial support interventions in the workplace as reported by nurses during the COVID-19 pandemic. The results obtained from 239 respondents showed that the score of compassion satisfaction significantly increased with the presence of each intervention, except for mental health awareness and education programs. Burnout scores, on the other hand, significantly decreased with the presence of each intervention. Meanwhile, there was no sufficient evidence to support the existence of a significant difference in the secondary traumatic stress scores of the nurses. Generally, the presence of the interventions enhances the CS and decreases the BO of nurses, while STS seems unaffected.

The lack of evidence for a significant difference in CS scores according to the existence of mental health awareness and education programs may be explained by the ineffectiveness of posters, leaflets, online campaigns, seminars, symposiums in improving CS given that nurses already have pre-existing knowledge and background on mental health. More robust programs may be employed such as in the study by Fu et al.[53] which investigated the effects of an education program consisting of relaxation exercises, self-care, and revitalization with emphasis on better sleep and eating habits, breathing exercises, and family and friends support network. The study concluded that the CS, BO, and STS levels of nurses improved after undergoing the program for four weeks.

Meanwhile, several studies concur with the current research findings in terms of CS and BO. The above-mentioned study asserts that family and community engagements through family and friends support networks can positively affect ProQOL. Physical and mental wellness activities in the form of yoga-based stress management and cognitive behavioral stress management were shown to positively affect the CS, BO, and STS among frontline mental health providers.[73] Similarly, findings of the study by Yilmaz et al.[74] showed that nurse-led intervention programs including lecture, mandala painting, motivational text

messages, and counselling, enhance CS, and reduce both BO and compassion fatigue among oncology nurses.

In terms of mental health services, the study by Viswanathan et al.[75] asserts that psychiatrist-facilitated peer support groups have shown to be effective in providing emotional support to nurses during the COVID-19 pandemic, as well as the conduct of individual counseling for workers with severe anxiety and who would prefer preserving the confidentiality of their condition.

Findings of Melnyk et al.[55] posits the positive impact of work accommodation and support programs to nurses' professional quality of life during the pandemic. The study reported that workplace wellness support and shorter shifts led to better mental and physical health, and high ProQOL. On the other hand, workplace belongingness supported by non-discriminatory policies, was observed to increase CS and decrease BO among mental health workers.[76]

While the above-mentioned studies have shown interventions that both improve CS and decrease CF, the randomized control trial by Pehlivan and Güner[77] on the effect of compassion fatigue resiliency program on nurses' professional quality of life showed no influence in BO but has positive impacts on CS. These findings are corroborated by a similar study of Kim and Park[78] wherein five, weekly 80-minute sessions about understanding CF, enhancing positive affect, balancing work-life, planning self-care, training in relaxation techniques, cognitive restructuring, and getting social support were observed to increase the CS among emergency nurses, while CF remained unaffected.

In contrast, findings of Potter et al.[79] showed decline in BO and STS after the implementation of a systemic program for compassion fatigue resiliency in the hospital setting. Additionally, personal reflective debriefing intervention, as a mental wellness activity, has been shown to potentially alleviate caring-related stress and increase nurses' resilience to counter CF.[80]

Focusing on burnout, in the study by Zadeh et al.,[81] supportive care provided to pediatric nurses through a 10-session wellness program involving combination of hands-on and didactic learning about art therapy, team building, communication, creating awareness and developing relaxation tools, assessment and treatment of pain, and massage for stress reduction, has shown to help nurses cope with BO.

In terms of secondary traumatic stress, the lack of significant difference in the scores according to the existence of interventions may suggest that the current programs being implemented are not sufficient to address the extreme stress brought by providing care to traumatized patients. This is supported by current study's reported prevalence of nurses with high STS levels. More comprehensive programs may be adopted such as those of the above cited studies whose interventions showed positive impact on the STS of healthcare workers.[53,73,79]

Interestingly, a one-day, self-compassion training study by Franco and Christie.[54] also obtained no significant difference in the pre- and post-intervention STS scores of pediatric nurses. The training involved reflection and facilitator-led mindfulness and self-compassion break activities. This finding was attributed to the lack of power to detect smaller effects, an occurrence similar to the current study due to sample size limitation. Besides low statistical power, the insufficient conduct of interventions at the individual and organizational level was also recognized as a probable cause of the lack of significant difference in STS scores.

Additionally, the systematic review conducted by Pollock et al.[82] affirmed that lack of sufficient equipment, staff, time, or skills for sustaining the intervention is a barrier for effective implementation. This, along with the lack of awareness regarding the needed support for mental well-being of frontline workers and organizations, hampers the delivery of interventions.

This is a reality in the Philippines where there is poor investment on mental health and shortage of mental health professionals who can support and sustain workplace psychosocial support interventions.[83] Only 3 to 5% of the total health budget is allocated for mental health. In terms of human resource, there are only two to three mental health specialists per 100, 000 population in the country,[84] a ratio lower than World Health Organization-recommended target of 10 psychiatrists per 100, 000 population. Hence, considerable increase in investment on mental health may also be needed to improve the implementation of workplace psychosocial interventions and as a result, the improvement of the professional quality of life of Filipino nurses.

Study Limitations

The limitations of the study came from two main factors: errors due to selection and errors due to the questionnaire, which affected the study's internal and external validity. The limitations due to selection are as follows: First, the questionnaire was administered online, which made it limited to nurse respondents with internet access. Second, non-response error was present due to the voluntary response sampling design. Third, individuals with strong opinions about the topic may also be over-represented because of voluntary response error. Fourth, only 239 respondents were eligible to participate in the study and the calculated minimum sample size was not reached, thereby impacting the generalizability of findings. Finally, another limitation due to selection is the possible overestimation of this positive ProQOL results, wherein selection error may have occurred as those who face worse psychosocial outcomes are likely to have already filed a sick leave or taken time off work. It is also possible that those that have the time and interest in answering the survey are those who are less stressed or are better able to adapt to stress.

The limitations due to the questionnaire are as follows: First, the questionnaires were self-administered and may have introduced response errors. Respondents may be unaware of psychosocial support interventions implemented in

their workplace, leading to inaccuracies. Additionally, some respondents may have provided neutral responses or extreme responses to quickly complete the questionnaire, or they may have misunderstood the use of the Likert Scale in Google Forms. Second, recall error may have also occurred since participants were asked about the existing interventions since the start of the COVID-19 pandemic in March 2020. Despite this, the data gathered may provide an overestimate of the psychosocial interventions implemented due to acquiescence error. Third, social desirability error may also provide an overestimate of the positive ProQOL results due to the stigma for mental health issues which may lead to nurses tending to answer positively. Lastly, the ProQOL data that were collected is limited to the participants' experience for the past 30 days preceding their submission of the questionnaire, therefore it is not representative of the ProQOL for the entire duration of the pandemic. These limitations were addressed by providing definitions or examples of the different psychosocial support interventions in the questionnaire. The respondents were also given one month to reply upon sending the survey via email and posting on Facebook, with frequent follow-up from the researchers. Incorrect entries were removed such as those with neutral responses (i.e., answered with "Sometimes" only) and extreme responses (i.e., answered with "Never" and "Very Often" only) as these are prone to response bias.

CONCLUSION

The study examined the ProQOL of nurses in the Philippines and the psychosocial support interventions existing in their workplaces. In summary, nurses in the Philippines exhibit a high and favorable ProQOL during the pandemic. They manifest high CS, moderate BO, and moderate STS, based on the means. In terms of prevalence, nurses were found to have moderate to high CS, low to moderate BO, and low to high STS. The majority of respondents reported the presence of mandatory psychosocial support interventions in the workplace during the pandemic. ProQOL scores of nurses were found to significantly differ in terms of demographic and employment characteristics, specifically CS by age, monthly income, and position, BO by age and years with current employer, and STS by region and area of assignment. The existence of workplace psychosocial support interventions as reported by nurses was also found to yield significant increase in CS and decrease in BO scores.

For future studies, the researchers recommend to recruit more respondents, administer the survey face-to-face, expand the inclusion criteria to include nurses who are not affiliated with the PNA and those working in other healthcare facilities, employ other data collection methods (e.g., focus group discussions among nurses, key informant interviews with concerned authorities, review of hospital records and policies), and use a probability sampling technique.

The study provided an overview of the current situation of nurses in the Philippines which can guide evidence-based decisions that reflect and address the mental health needs of nurses in the field. Several action points are recommended in line with these findings. For policy makers and government agencies, there is a need to strengthen enforcement, monitoring and evaluation of policies that mandate the implementation of mental health programs in the workplace, especially during times of health crises such as pandemics.

For hospital administrators, it is recommended to enhance awareness and accessibility of workplace psychosocial support interventions and provide clear guidelines for accessing these services. Community engagement, the least reported intervention in this study, should also be promoted as a psychosocial support intervention for nurses in the form of support groups, community outreach programs, partnerships with local mental health organizations, and promotion of workplace culture involving family members of the health care staff. Workplace interventions should also be tailored to address the unique needs of different groups of nurses. For example, interventions for younger nurses or those with lower income may focus on stress management techniques and ensuring appropriate remuneration or financial support programs. It is also recommended to strengthen policy compliance and implement monitoring and evaluation through regular surveys, feedback mechanisms, and tracking ProQOL scores over time.

Professional nursing organizations like the PNA may leverage the data from this study to advocate and lobby for better working conditions, compensation, and mental health programs for nurses. The lack of significant improvement in ProQOL scores despite the existence of mental health awareness and education programs may suggest that these are currently insufficient and need to be reviewed and reinforced with other activities.

Statement of Authorship

All authors certified fulfillment of ICMJE authorship criteria.

Author Disclosure

All authors declared no conflicts of interest.

Funding Source

This study was funded by the authors.

REFERENCES

1. Zhu N, Zhang D, Wang W, Li X, Yang B, Song J, et al. A novel coronavirus from patients with pneumonia in China, 2019. N Engl J Med. 2020 Feb 20;382(8):727-733. doi: 10.1056/NEJMoa2001017. Epub 2020 Jan 24. PMID: 31978945; PMCID: PMC7092803.
2. World Health Organization, WHO director-general's opening remarks at the media briefing on COVID-19 [Internet]. 2020 [cited 2021 Mar]. Available from: https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020

3. World Health Organization, COVID-19 Weekly Epidemiological Update (No. 59) [Internet]. 2021 [cited 2021 Sep]. Available from: https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---28-september-2021
4. Department of Health, Beat COVID-19 Today: A COVID-19 Philippine Situationer (No. 518) [Internet]. 2021 [cited 2021 Sep]. Available from: https://drive.google.com/drive/folders/1Wxf8TbpSuWrGBOYitZCyFaG_NmdCooCa
5. Preti E, Di Mattei V, Perego G, Ferrari F, Mazzetti M, Taranto P, et al. The psychological impact of epidemic and pandemic outbreaks on healthcare workers: rapid review of the evidence. Curr Psychiatry Rep. 2020 Jul 10;22(8):43. doi: 10.1007/s11920-020-01166-z. PMID: 32651717; PMCID: PMC7350408.
6. De Kock JH, Latham HA, Leslie SJ, Grindle M, Munoz SA, Ellis L, et al. A rapid review of the impact of COVID-19 on the mental health of healthcare workers: implications for supporting psychological well-being. BMC Public Health. 2021 Jan 9;21(1):104. doi: 10.1186/s12889-020-10070-3. PMID: 33422039; PMCID: PMC7794640.
7. Shanafelt T, Ripp J, Trockel M. Understanding and addressing sources of anxiety among health care professionals during the COVID-19 pandemic. J Am Med Assoc. 2020 Jun 2;323(21):2133-2134. doi: 10.1001/jama.2020.5893. PMID: 32259193.
8. Xiang YT, Yang Y, Li W, Zhang L, Zhang Q, Cheung T, et al. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. Lancet Psychiatry. 2020 Mar;7(3):228-229. doi: 10.1016/S2215-0366(20)30046-8. Epub 2020 Feb 4. PMID: 32032543; PMCID: PMC7128153.
9. Franklin P, Gkiouleka A. A scoping review of psychosocial risks to health workers during the COVID-19 pandemic. Int J Environ Res Public Health. 2021 Mar 2;18(5):2453. doi: 10.3390/ijerph18052453. PMID: 33801517; PMCID: PMC7967576.
10. Cabarkapa S, Nadjidai SE, Murgier J, Ng CH. The psychological impact of COVID-19 and other viral epidemics on frontline healthcare workers and ways to address it: A rapid systematic review. Brain Behav Immun. 2020 Oct;8:100144. doi: 10.1016/j.bbih.2020.100144. Epub 2020 Sep 17. PMID: 32959031; PMCID: PMC7494453.
11. International Council of Nurses, Protecting nurses from COVID-19 a top priority: A Survey of ICN's national nursing associations [Internet]. 2020 [cited 2021 Apr]. Available from: https://www.icn.ch/system/files/documents/2020-09/Analysis_COVID-19%20survey%20feedback_14.09.2020.pdf
12. Biana HT, Joaquin J. COVID-19: The need to heed distress calls of healthcare workers. J Public Health. 2020 Nov 23;42(4):853-854. doi: 10.1093/pubmed/fdaa145. PMID: 32880644; PMCID: PMC7499671.
13. UNICEF, "We are not the virus": Health workers speak to UNICEF about their struggles [Internet]. 2020 [cited 2021 Apr]. Available from: https://www.unicef.org/philippines/stories/we-are-not-virus
14. Labrague LJ, De Los Santos JAA. COVID-19 anxiety among front-line nurses: Predictive role of organisational support, personal resilience and social support. J Nurs Manag. 2020 Oct;28(7):1653-1661. doi: 10.1111/jonm.13121. Epub 2020 Aug 21. PMID: 32770780; PMCID: PMC7436313.
15. Hunsaker S, Chen HC, Maughan D, Heaston S. Factors that influence the development of compassion fatigue, burnout, and compassion satisfaction in emergency department nurses. J Nurs Scholarsh. 2015 Mar;47(2):186-94. doi: 10.1111/jnu.12122. Epub 2015 Jan 20. PMID: 25644276.
16. Roney LN, Acri MC. The cost of caring: an exploration of compassion fatigue, compassion satisfaction, and job satisfaction in pediatric nurses. J Pediatr Nurs. 2018 May-Jun;40:74-80. doi: 10.1016/j.pedn.2018.01.016. Epub 2018 Feb 3. PMID: 29402658.
17. Ruiz-Fernández MD, Pérez-García E, Ortega-Galán ÁM. Quality of life in nursing professionals: burnout, fatigue, and compassion satisfaction. Int J Environ Res Public Health. 2020 Feb 15;17(4):1253. doi: 10.3390/ijerph17041253. PMID: 32075252; PMCID: PMC7068555.
18. Stamm BH. The Concise ProQOL Manual, 2nd Ed. Pocatello ID: The ProQOL.org; 2010.
19. Nolte A, Downing C, Temane A, Hastings-Tolsma M. Compassion fatigue in nurses: A metasynthesis. J Clin Nurs. 2017 Dec;26(23-24):4364-4378. doi: 10.1111/jocn.13766. Epub 2017 Apr 20. PMID: 28231623.
20. Ruiz-Fernández MD, Ramos-Pichardo JD, Ibáñez-Masero O, Cabrera-Troya J, Carmona-Rega MI, Ortega-Galán ÁM. Compassion fatigue, burnout, compassion satisfaction and perceived stress in healthcare professionals during the COVID-19 health crisis in Spain. J Clin Nurs. 2020 Nov;29(21-22):4321-4330. doi: 10.1111/jocn.15469. Epub 2020 Sep 15. PMID: 32860287.
21. Sacco TL, Ciurzynski SM, Harvey ME, Ingersoll GL. Compassion satisfaction and compassion fatigue among critical care nurses. Crit Care Nurse. 2015 Aug;35(4):32-43. doi: 10.4037/ccn2015392. PMID: 26232800.
22. El-Shafei DA, Abdelsalam AE, Hammam RAM, Elgohary H. Professional quality of life, wellness education, and coping strategies among emergency physicians. Environ Sci Pollut Res Int. 2018 Mar;25(9):9040-9050. doi: 10.1007/s11356-018-1240-y. Epub 2018 Jan 14. PMID: 29333570.
23. Buselli R, Corsi M, Baldanzi S, Chiumiento M, Del Lupo E, Dell'Oste V, et al. Professional quality of life and mental health outcomes among health care workers exposed to SARS-CoV-2 (COVID-19). Int J Environ Res Public Health. 2020 Aug 26;17(17):6180. doi: 10.3390/ijerph17176180. PMID: 32858810; PMCID: PMC7504107.
24. Wu Y, Wang J, Luo C, Hu S, Lin X, Anderson AE, et al. A comparison of burnout frequency among oncology physicians and nurses working on the frontline and usual wards during the COVID-19 epidemic in Wuhan, China. J Pain Symptom Manage. 2020 Jul;60(1):e60-e65. doi: 10.1016/j.jpainsymman.2020.04.008. Epub 2020 Apr 10. PMID: 32283221; PMCID: PMC7151285.
25. Balinbin CBV, Balatbat KTR, Balayan ANB, Balcueva MIC, Balicat MGB, Balidoy TAS, Macindo JRB, Torres GCS. Occupational determinants of compassion satisfaction and compassion fatigue among Filipino registered nurses. J Clin Nurs. 2020 Mar;29(5-6):955-963. doi: 10.1111/jocn.15163. Epub 2020 Jan 13. PMID: 31887244.
26. Tamayo RJ, Mugol HL, Carabit QM, Briones TM, Aliwalas KN, Andres AD, et al. Professional quality of life of staff nurses in the Cancer Institute of the Philippine General Hospital. J Oncol Navig Surviv. 2016 Oct;7(9):32.
27. Adolfo CS. Predictors of professional quality of life among nurses: A cross-sectional study. Int J Adv Appl Sci. 2021 Feb;8(2):44-53. doi: 10.21833/ijaas.2021.02.006.
28. World Health Organization, COVID-19: Occupational health and safety for health: Interim guidance [Internet]. 2021 [cited 2021 May]. Available from: https://www.who.int/publications/i/item/WHO-2019-nCoV-HCW_advice-2021.1
29. Civil Service Commission, Mental Health Program in the Public Sector (Memorandum Circular 04-2020) [Internet]. 2020 [cited 2021 May]. Available from: https://www.csguide.org/items/show/1398
30. Department of Labor and Employment, Guidelines for the Implementation of Mental Health Workplace Policies and Programs for the Private Sector (Department Order 208-20) [Internet]. 2020 [cited 2021 May]. Available from: https://www.dole.gov.ph/news/do-208-20-guidelines-for-the-implementation-of-mental-health-workplace-policies-and-programs-for-the-private-sector/
31. Philippine Nurses Association, Inc, Philippine Nurses Association, Inc. - About Us [Internet]. [cited 2021 May]. Available from: https://pna-ph.org/the-company/about-pna/history
32. Kasirajan A, Non-Probability Sampling Methods Explained. 2020 [cited 2021 May]. Available from: https://medium.com/@minions.k/non-probability-sampling-methods-explained-afab51fcbdd7
33. Cao X, Li J, Gong S. The relationships of both transition shock, empathy, resilience and coping strategies with professional quality of life in newly graduated nurses. BMC Nurs. 2021 Apr 23;20(1):65. doi: 10.1186/s12912-021-00589-0. PMID: 33888101; PMCID: PMC8062214.
34. Farber DJE, Payton DC, Dorney DP. Life balance and professional quality of life among baccalaureate nurse faculty. J Prof Nurs. 2020 Nov-Dec;36(6):587-594. doi: 10.1016/j.profnurs.2020.08.010. Epub 2020 Aug 21. PMID: 33308559.

35. Remegio W, Rivera RR, Griffin MQ, Fitzpatrick JJ. The professional quality of life and work engagement of nurse leaders. Nurse Lead. 2021 Feb;19(1):95-100. doi: 10.1016/j.mnl.2020.08.001. Epub 2020 Sep 8. Erratum in: Nurse Lead. 2022 Dec;20(6):626. doi: 10.1016/j.mnl.2022.09.012. PMID: 32922218; PMCID: PMC7476903.
36. Department of Health, Interim Guidelines on COVID-19 Referral Hospitals (Department Memorandum No. 2020-0142) [Internet]. 2020 [cited 2021 May]. Available from: https://doh.gov.ph/sites/default/files/health-update/dm2020-0142.pdf
37. Sadang JM. The lived experience of Filipino nurses' work in COVID-19 quarantine facilities: a descriptive phenomenological study. Pac Rim Int J Nurs Res. 2020 Dec;25(1):154-164.
38. Spoorthy MS, Pratapa SK, Mahant S. Mental health problems faced by healthcare workers due to the COVID-19 pandemic–a review. Asian J Psychiatr. 2020 Jun;51:102119. doi: 10.1016/j.ajp.2020.102119. Epub 2020 Apr 22. PMID: 32339895; PMCID: PMC7175897.
39. Jiang W, Zhao X, Jiang J, Zhou Q, Yang J, Chen Y, et al. Hospital ethical climate associated with the professional quality of life among nurses during the early stage of COVID-19 pandemic in Wuhan, China: a cross-sectional study. Int J Nurs Sci. 2021 May 12;8(3):310-317. doi: 10.1016/j.ijnss.2021.05.002. PMID: 34307780; PMCID: PMC8283712.
40. Inocian EP, Cruz JP, Saeed Alshehry A, Alshamlani Y, Ignacio EH, Tumala RB. Professional quality of life and caring behaviours among clinical nurses during the COVID-19 pandemic. J Clin Nurs. 2021 Jul 6:10.1111/jocn.15937. doi: 10.1111/jocn.15937. Epub ahead of print. PMID: 34231269; PMCID: PMC8446991.
41. Zhou Q, Lai X, Wan C, Zhang X, Tan L. Impact of burnout, secondary traumatic stress, and compassion satisfaction on hand hygiene of healthcare workers in medical aid team during COVID-19 pandemic. Nurs Open. 2021 Sep;8(5):2551-2557. doi: 10.1002/nop2.786. Epub 2021 Feb 19. PMID: 33605557; PMCID: PMC8014518.
42. Ruiz-Fernández MD, Ramos-Pichardo JD, Ibáñez-Masero O, Carmona-Rega MI, Sánchez-Ruiz MJ, et al. Professional quality of life, self-compassion, resilience, and empathy in healthcare professionals during COVID-19 crisis in Spain. Res Nurs Health. 2021 Aug;44(4):620-632. doi: 10.1002/nur.22158. Epub 2021 May 25. PMID: 34036600; PMCID: PMC8242676.
43. Cuartero-Castañer ME, Hidalgo-Andrade P, Cañas-Lerma AJ. Professional quality of life, engagement, and self-care in healthcare professionals in Ecuador during the COVID-19 pandemic. Healthcare. Healthcare (Basel). 2021 Apr 29;9(5):515. doi: 10.3390/healthcare9050515. PMID: 33946629; PMCID: PMC8146458.
44. Mostafazadeh A, Ghorbani-Sani S, Seyed-Mohammadi N, Ghaderjola K, Habibpour, Z. Resilience and its relationship with occupational stress and professional quality of life among nurses in COVID-19 isolation wards. Preprint. Posted online February 25, 2021. Research Square. doi:10.21203/rs.3.rs-240339/v1.
45. Tehranineshat B, Torabizadeh C, Bijani M. A study of the relationship between professional values and ethical climate and nurses' professional quality of life in Iran. Int J Nurs Sci. 2020 Jun 5;7(3):313-319. doi: 10.1016/j.ijnss.2020.06.001. PMID: 32817854; PMCID: PMC7424154.
46. Jamison DT, Lau LJ, Wu KB, Xiong Y. Country performance against COVID-19: rankings for 35 countries. BMJ Glob Health. 2020 Dec;5(12):e003047. doi: 10.1136/bmjgh-2020-003047.
47. Labrague LJ, de Los Santos JAA. Fear of COVID-19, psychological distress, work satisfaction and turnover intention among frontline nurses. J Nurs Manag. 2021 Apr;29(3):395-403. doi: 10.1111/jonm.13168. Epub 2020 Oct 11. PMID: 32985046; PMCID: PMC7537256.
48. Labrague LJ. Pandemic fatigue and clinical nurses' mental health, sleep quality and job contentment during the covid-19 pandemic: The mediating role of resilience. J Nurs Manag. 2021 Oct;29(7):1992-2001. doi: 10.1111/jonm.13383. Epub 2021 Jun 9. PMID: 34018270; PMCID: PMC8237073.
49. Antonio NC. Filipino bayanihan spirit shines through amid coronavirus outbreak [Internet]. 2020 [cited 2021 Dec]. Available from: https://www.rappler.com/moveph/filipino-bayanihan-spirit-shines-coronavirus-outbreak/
50. Department of Health, Filipino Bayanihan spirit helps COVID-19 frontliner survive [Internet]. 2020 [cited 2021 Dec]. Available from: https://doh.gov.ph/press-release/FILIPINO-BAYANIHAN-SPIRIT-HELPS-COVID-19-FRONTLINER-SURVIVE
51. Tabios H, Antonio R, Luci-Atienza C. Bayanihan spirit alive in fight vs COVID-19 [Internet]. 2020 [cited 2021 Nov]. Available from https://mb.com.ph/2020/03/24/bayanihan-spirit-alive-in-fight-vs-covid-19/
52. Akyurek G, Avci N, Ekici G. The effects of "Workplace Health Promotion Program" in nurses: a randomized controlled trial and one-year follow-up. Health Care Women Int. 2022 Sep;43(9):980-996. doi: 10.1080/07399332.2020.1800013. Epub 2020 Aug 17. PMID: 32804602.
53. Fu CY, Kao CC, Wang RH. The effects of an educational program on the professional quality of life and health of nurses: a cluster experimental design. J Nurs Res. 2021 Mar 19;29(3):e149. doi: 10.1097/JNR.0000000000000426. PMID: 33756520; PMCID: PMC8126496.
54. Franco PL, Christie LM. Effectiveness of a one day self-compassion training for pediatric nurses' resilience. J Pediatr Nurs. 2021 Nov-Dec;61:109-114. doi: 10.1016/j.pedn.2021.03.020. Epub 2021 Apr 8. PMID: 33839602.
55. Melnyk BM, Hsieh AP, Tan A, Teall AM, Weberg D, Jun J, et al. Associations among nurses' mental/physical health, lifestyle behaviors, shift length, and workplace wellness support during COVID-19. Nurs Adm Q. 2022 Jan-Mar 01;46(1):5-18. doi: 10.1097/NAQ.0000000000000499. PMID: 34551423; PMCID: PMC8647526.
56. Weheida SM, Niazy RA, Mohamed BMAH, Othman AIB, Riad NA. Effectiveness of application of WHO multimodal strategy for improvement of knowledge, practice, and professional quality of life of nurses during COVID-19 pandemic. Egyptian Journal of Health Care. 2021 Sep;12(3):1063-76. doi: 10.21608/ejhc.2021.194020.
57. Republic of the Philippines, Republic Act 11038 or the Mental Health Act of 2018 [Internet]. 2018 [cited 2021 Nov]. Available from: https://www.officialgazette.gov.ph/downloads/2018/06jun/20180622-RA-11038-RRD.pdf
58. Psychosocial Support and Children's Rights Resource Center (PSTCRRC) and Mental Health and Psychosocial Support Network (MHPSSN), Mental Health and Psychosocial Support in Philippines, Minimal Response Matrix and Mapping: Final Report [Internet]. [cited 2021 Nov]. Available from: https://www.alnap.org/system/files/content/resource/files/main/mhpss-philippines-mapping-final-version.pdf
59. Department of Health, National Unified Health Research Agenda 2017-2022. 2020 [cited 2021 Nov]. Available from: https://doh.gov.ph/sites/default/files/publications/NUHRA.pdf
60. Tuliao AP. Mental health help seeking among Filipinos: a review of the literature. Asia Pac J Couns Psychother. 2014 May; 5(2):124-36. doi: 10.1080/21507686.2014.913641.
61. Yang L, Kleinman A, Link B, Phelan J, Lee S, Good B. Culture and stigma: Adding moral experience to stigma theory. Soc Sci Med. 2007 Apr;64(7):1524-35. doi: 10.1016/j.socscimed.2006.11.013. Epub 2006 Dec 22. PMID: 17188411.
62. Lauber C. Stigma and discrimination against people with mental illness: A critical appraisal. Epidemiol Psichiatr Soc. 2008 Jan-Mar; 17(1):10-3. doi:10.1017/s1121189x0000261x. PMID: 18444451.
63. Tanaka C, Tuliao MT, Tanaka E, Yamashita T, Matsuo H. A qualitative study on the stigma experienced by people with mental health problems and epilepsy in the Philippines. BMC Psychiatry. 2018 Oct 5;18(1):325. doi: 10.1186/s12888-018-1902-9. PMID: 30290782; PMCID: PMC6173886.
64. Martinez AB, Co M, Lau J, Brown J. Filipino help-seeking for mental health problems and associated barriers and facilitators: a systematic review. Soc Psychiatry Psychiatr Epidemiol. 2020 Nov;55(11): 1397-1413. doi: 10.1007/s00127-020-01937-2. Epub 2020 Aug 20. PMID: 32816062; PMCID: PMC7578164.
65. Merk T. Compassion fatigue, compassion satisfaction and burnout among pediatric nurses. Air Medical Journal. 2018 Sep; 37(5):292. doi: 10.1016/j.amj.2018.07.014.

66. Kelbiso L, Belay A, Woldie M. Determinants of quality of work life among nurses working in Hawassa town public health facilities, South Ethiopia: a cross-sectional study. Nurs Res Pract. 2017 Dec; 207:5181676. doi:10.1155/2017/5181676.
67. Wongtim S, Siritarungsri B. Impact of COVID-19 pandemic on professional quality of life and coping strategy among nurses in Thailand. ASEAN Journal of Open and Distance Learning. 2021 Feb; 2020(Special Issue):14-23.
68. Rücker F, Hårdstedt M, Rücker SCM, Aspelin E, Smirnoff A, Lindblom A, et al. From chaos to control–experiences of healthcare workers during the early phase of the COVID-19 pandemic: a focus group study. BMC Health Serv Res. 2021 Nov 10;21(1):1219. doi: 10.1186/s12913-021-07248-9. PMID: 34758837; PMCID: PMC8579171.
69. Toole M. The Philippines passes the 2 million mark as COVID-19 cases surge in Southeast Asia [Internet]. 2021 [cited 2021 Nov]. Available from: https://theconversation.com/the-philippines-passes-the-2-million-mark-as-covid-19-cases-surge-in-southeast-asia-167186.
70. Salimi S, Pakpour V, Rahmani A, Wilson M, Feizollahzadeh H. Compassion satisfaction, burnout, and secondary traumatic stress among critical care nurses in Iran. J Transcult Nurs. 2020 Jan;31(1):59-66. doi: 10.1177/1043659619838876. Epub 2019 Apr 8. PMID: 30957715.
71. Lee HJ, Lee M, Jang SJ. Compassion satisfaction, secondary traumatic stress, and burnout among nurses working in trauma centers: a cross-sectional study. Int J Environ Res Public Health. 2021 Jul 6;18(14):7228. doi: 10.3390/ijerph18147228. PMID: 34299686; PMCID: PMC8307372.
72. UP COVID-19 Pandemic Response Team. Estimating local healthcare capacity to deal with covid-19 case surge: Analysis and recommendations. University of the Philippines [Internet]. 2020 [cited 2021 Nov]. Available from: https://up.edu.ph/estimating-local-healthcare-capacity-to-deal-with-covid-19-case-surge-analysis-and-recommendations/.
73. Riley KE, Park CL, Wilson A, Sabo, AN, Antoni MH, Braun TD, et al. Improving physical and mental health in frontline mental health care providers: Yoga-based stress management versus cognitive behavioral stress management. J Workplace Behav Health. 2017;32(1):26-48. doi: 10.1080/15555240.2016.1261254. Epub 2016 Dec 16. PMID: 33354168; PMCID: PMC7751948.
74. Yilmaz G, Üstün B, Günüşen NP. Effect of a nurse-led intervention programme on professional quality of life and post-traumatic growth in oncology nurses. Int J Nurs Pract. 2018 Dec;24(6):e12687. doi: 10.1111/ijn.12687. Epub 2018 Aug 5. PMID: 30079550.
75. Viswanathan R, Myers MF, Fanous AH. Support groups and individual mental health care via video conferencing for frontline clinicians during the COVID-19 pandemic. Psychosomatics. 2020 Sep-Oct; 61(5):538-543. doi: 10.1016/j.psym.2020.06.014. Epub 2020 Jun 23. PMID: 32660876; PMCID: PMC7308785.
76. Somoray K, Shakespeare-finch J, Armstrong D. The impact of personality and workplace belongingness on mental health workers' professional quality of life. Aust Psychol. 2016 Jun;52(1):52-60. doi: 10.1111/ap.12182.
77. Pehlivan T, Güner P. Effect of a compassion fatigue resiliency program on nurses' professional quality of life, perceived stress, resilience: a randomized controlled trial. J Adv Nurs. 2020 Dec;76(12):3584-3596. doi: 10.1111/jan.14568. Epub 2020 Oct 3. PMID: 33009840.
78. Kim YA, Park JS. Development and application of an overcoming compassion fatigue program for emergency nurses. J Korean Acad Nurs. 2016 Apr;46(2):260-70. Korean. doi: 10.4040/jkan.2016.46.2.260. PMID: 27182022.
79. Potter P, Deshields T, Rodriguez S. Developing a systemic program for compassion fatigue. Nurs Adm Q. 2013 Oct-Dec;37(4):326-32. doi: 10.1097/NAQ.0b013e3182a2f9dd. PMID: 24022286.
80. Schmidt M, Haglund K. Debrief in emergency departments to improve compassion fatigue and promote resiliency. J Trauma Nurs. 2017 Sep/Oct;24(5):317-322. doi: 10.1097/JTN.0000000000000315. PMID: 28885522.
81. Zadeh S, Gamba N, Hudson C, Wiener L. Taking care of care providers: a wellness program for pediatric nurses. J Pediatr Oncol Nurs. 2012 Sep-Oct;29(5):294-9. doi: 10.1177/1043454212451793. PMID: 22907685; PMCID: PMC5178976.
82. Pollock A, Campbell P, Cheyne J, Cowie J, Davis B, McCallum J, et al. Interventions to support the resilience and mental health of frontline health and social care professionals during and after a disease outbreak, epidemic or pandemic: a mixed methods systematic review. Cochrane Database Syst Rev. 2020 Nov 5;11(11): CD013779. doi: 10.1002/14651858.CD013779. PMID: 33150970; PMCID: PMC8226433.
83. Lally J, Tully J, Samaniego R. Mental health services in the Philippines. BJPsych Int. 2019 Aug;16(3):62-64. doi: 10.1192/bji.2018.34. PMID: 31385955; PMCID: PMC6646843.
84. World Health Organization & Department of Health, WHO-AIMS Report on Mental Health System in the Philippines [Internet]. 2006 [cited 2021 Nov]. Available from: https://www.who.int/mental_health/evidence/philippines_who_aims_report.pdf
85. Ortega-Galán AM, Ruiz-Fernández MD, Lirola MJ, Ramos-Pichardo JD, Ibanez-Masero O, Cabrera-Troya J, et al. Professional quality of life and perceived stress in health professionals before COVID-19 in Spain: primary and hospital care. Healthcare (Basel), 2020 Nov 13;8(4):484. doi: 10.3390/healthcare8040484. PMID: 33202750; PMCID: PMC7711881.
86. Craigie M, Slatyer S, Hegney D, Osseiran-Moisson R, Davis S, Dolan T, et al. A pilot evaluation of a Mindful Self-care and Resiliency (MSCR) intervention for nurses. Mindfulness. 2016 Apr;7:764–74. doi: 10.1007/s12671-016-0516-x.