ORIGINAL ARTICLE

Fear of COVID-19, poor quality of sleep, irritability, and intention to quit school among nursing students: A cross-sectional study

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Abstract

Purpose: This study aims to assess the fear of coronavirus disease 2019 (COVID-19) and its influence on the students' fear of COVID-19 and intention to leave nursing school.

Design and Methods: This study employed a cross-sectional design using self-report questionnaires distributed to 261 nursing students from the Philippines.

Findings: The first-year nursing students are found to be the most fearful among the group. The students' fear of COVID-19 is associated with their high irritability, poor sleep quality, and desire to quit nursing school.

Practice Implications: Students are perturbed by the pandemic and teachers should implement supportive, teaching–learning strategies to address the student's needs.

KEYWORDS
COVID-19 pandemic, fear, intention to quit, irritability, nursing, sleep quality

1 | INTRODUCTION

The coronavirus disease 2019 (COVID-19) pandemic led to unprecedented damage in all facets of life on a global scale. As of August 21, 2020, there are 22,536,278 confirmed cases with 789,197 deaths of people worldwide.[1] The USA, Brazil, and India lead in the number of cases in which health workers are deemed as one of the most vulnerable group. In the Philippines, there are 178,022 cases of infection, with 2,883 deaths recorded as of August 21, 2020.[1] The unparalleled disturbance caused by the pandemic has challenged the leaders to come up with sound governance to address economic and health issues, and to meet the demands of their countries. COVID-19 has left every nation to realize that in spite of technological and medical advancements, the virulence and infectivity of the virus has taken their toll to collapse health systems and take the lives of those who provide frontline services. Consequently, the pandemic has caused significant disruptions in the implementation of programs across educational institutions, and the most affected are the students.

1.1 | Literature Review

In nursing education, there are growing studies on the impact of the COVID-19 pandemic, particularly on the implementation of the program and among the learners–the nursing students.[2,3]

The lack of in-person face-to-to face classes diverted the strategies and courses to shift into distance-education already. For instance, nurse educators advocated the shifting of their delivery online to make undergraduate students learn and enhance competency in hand hygiene while complying with the minimum health standard in the time of the pandemic.[4] Similarly, in Taiwan, the implementation of nursing education shifted to flexible learning paralleled with adequate student support and counseling to bridge the gap of knowledge while ensuring student wellness.[5] The closing of schools has significantly changed the delivery of courses even in graduate nursing education. Some nursing schools in the USA adopted abrupt course revisions and changing didactics into student-centered reflexive learning as a means to deliver quality education despite the school lockdown.[6]

Previous studies have well discussed the effect of disaster-related stress and stress in general among students. Without a doubt, COVID-19 has caused additional psychological stress, weariness, and discomfort among nursing students. The pandemic has caused an additional burden to the already stressed disposition of these students, which can be traced to a variety of stressors present much before the pandemic. Various scholars have claimed that nursing students seem to be more stressed compared to other students in other degrees.[7,8] Typically, a nursing student's stress may come from the course requirements, clinical placements, and personal expectations[9–11]

Martinez-Lorca et al.[12] found that students enrolled in health science education display more fear of the COVID-19 virus compared to other students from other degree programs. In another study, it reported that nursing students have a good attitude in terms of their willingness to care for COVID-19-inflicted patients regardless of their lack of proper education and training and management of these cases.[13] Nursing students would prefer to complete their clinical placements and finish their bachelor of science in nursing degrees, notwithstanding the risk of contracting the virus.[14]

On the other hand, Lee et al.[15] found that nursing students are stressed during disasters. In a qualitative study conducted in Croatia, nursing students understood the risks involved in the profession of nursing; however, they expressed fear in infecting their families after being exposed to the virus during their clinical duties.[16] Likewise, some reports found that COVID-19 has brought loneliness[17] and moderate to high anxiety among nursing students, especially among women and those living in urban areas.[18,19] Further, Romero-Blanco et al.[20] found in their longitudinal study that the quarantine protocols of the COVID-19 have caused significant disruption of sleeping pattern and reduced sleep quality among nursing students.

A few studies exist examining the fear of nursing students related to the pandemic; however, studies examining how their fears affect their sleep and temperament, and their intention to quit from nursing school is scarce. Hence this study was conducted to assess the students' fear of COVID-19 and how this influence their irritability, sleep, and intention to quit nursing school.

2 | METHODOLOGY

2.1 | Research design

This is a cross-sectional study employing self-report questionnaires

2.2 | Setting and data collection

This study was conducted in the central Philippines between the months of May and July 2020. The researchers corresponded with different nursing schools to inform and seek approval to conduct the study. The survey link was forwarded to the school to facilitate and aid in dissemination to the participants. The researcher followed up on the status of data collection three days after the link was delivered.

2.3 | Participants

The sample size was estimated using GPower application at 0.07 anticipated effect size, probability level of 0.05, and statistical power of 0.08. The required minimum number of participants was set to a minimum of 250. A total of 261 nursing students from different year levels participated in the study, or a response rate of 93.2% was achieved. The students were recruited via the snowball method following inclusion criteria, where only students aged 18 years old and above and who have consented to participate were included in the study. An online survey link (Google doc) was forwarded to the students' emails or social network accounts, such as Facebook, Messenger, and Viber to facilitate the data collection. The researchers verified with the schools based on the declared affiliation of the participants. Unverified responses were excluded from the study.

2.4 | Instrumentation

Four questionnaires were used to assess the main variables of the study.

The fear of COVID-19 was assessed using the fear of COVID-19 scale by Ahorsu et al.[21] The scale has a total of seven items and uses a five-point Likert scale, where participants scored from 1 "strongly disagree" to 5 "strongly agree." The scale has a composite reliability of 0.88, which indicates good reliability in measuring the fear construct.

To assess the students' sleep quality, we utilized the single-item sleep quality scale by Snyder et al.[22] The scale is known to have good validity and reliability indices as tested among patients in different weeks' time. In this study, we asked the participants to reflect on their sleep quality within the past 7 days and rate it in an overall quality score between 0 and 10.

The brief irritability test by Holtzman et al.[23] was used to assess the nursing students' sense of irritability. The five-item scale uses a six-point Likert, where the participants scored from 1 "never" to 6" always." The scale is a reliable and valid instrument to measure irritability with Cronbach's alpha of greater 0.88.

Intention to leave nursing education was assessed using a single-item question "Given the current pandemic, I think of abandoning school." The participants answered using a five-point Likert scale ranging from 5 (extremely likely) to 1 (extremely unlikely).

2.5 | Data analysis

The SPSS version 23 was used to aid in the analysis of the variables. The data were analyzed using both descriptive and inferential statistics. Frequency counts, percentages, means, and standard deviations were used to quantify the profile variables. Similarly, the correlation between the nursing students' profile and key variables of the study were analyzed using analysis of variance, and Pearson's r and Spearman-rho coefficients. Multiple linear regression was used to assess predictor power of the variables of the study. The data significance was set to less than 0.05.

2.6 | Ethical consideration

This study complied with the basic ethical guidelines in conducting the research. The research protocol was evaluated and granted ethical approval by the Visayas State University-College of Nursing Ethics Review Committee and has a code, RES-CON-01. The researchers observed measures of safeguarding the rights of the participants of the study through informed consent.

3 | RESULTS

Table 1 displays the demographics of student participants. Two hundred sixty-one student nurses participated in the study. The average age of the students was 20.70 years and comprised mainly of female participants ($n = 212$, 81.2%). Most of these students are in their second year in the nursing program (38.3%). The majority of these students are from public schools (67.8%) that are situated in urban areas (68.6%). Most of the participants claimed to have no attendance to any COVID-19-related training (85.8%).

Remarkably, the nursing students fear COVID-19 ($M = 20.34$, $SD = 6.05$). The majority of the participants answered that they are somewhat not prepared to care for patients with COVID-19 (41.8%), while most of them are unsure whether to care for one (40.6%). The students claimed to have moderate sleep quality ($M = 2.74$, $SD = 2.09$), and intention to leave nursing education ($M = 2.09$, $SD = 1.16$). Noteworthy, however, is their high irritability ($M = 3.44$, $SD = 1.27$).

Presented in Table 2 are the results of the bivariate analysis used to determine the correlation of the key variables to the student's profile. Results revealed that there is a moderate to high fear of COVID-19 among students across all year levels. Notably, the first-year students display the greatest fear among the group ($M = 21.47$, $SD = 6.49$). Moreover, results suggest that the students fear of COVID-19 is significantly correlated to their readiness to care for patients with COVID-19 ($r = -0.127$, $p = 0.041$) as well as their willingness to care for COVID-19 cases ($r = -0.199$ $p = 0.001$). Similarly, their fear of the virus is correlated to their sleep quality ($r = -0.124$, $p = 0.45$), sense of irritability ($r = 0.201$, $p = 0.001$), and their intention to leave the nursing education ($r = 0.202$, $p = 0.001$).

The multivariate analysis using multiple linear regression model is presented in Table 3 with fear of COVID-19 as the dependent variable, and students year level and readiness and willingness to care for COVID-19 patients as the independent variables. The statistical model revealed that fear of COVID-19 could explain 6.3% of the variance in the independent variables ($F = 3.328$, $p = 0.006$). Assuming all else being equal in the independent variables and controlling the first-year level, the model revealed that the fourth-year level ($\beta = -1.63$, $p = 0.021$), and willingness to care for COVID-19 patients ($\beta = -0.165$, $p = 0.018$) could significantly predict fear of the virus.

Table 4 presents the regression analysis on the influence of fear of COVID-19 on the students' outcomes. Results revealed that fear of COVID-19 negatively affects the students' sleep quality ($\beta = -0.124$, $p = 0.045$). Conversely, the students fear significantly influence their sense of irritability ($\beta = 0.201$, $p = 0.001$) and intention to leave the nursing school ($\beta = 0.202$, $p = 0.001$)

4 | DISCUSSION

The primary purpose of this study was to assess the fear of COVID-19 among prelicensure nurses and its impact on their well-being and intention to leave the nursing education.

TABLE 1 Students' characteristics and descriptive ($n = 261$)

Characteristics	Categories	N	%
Gender	Male	49	18.8
	Female	212	81.2
Year level	1	65	24.9
	2	100	38.3
	3	65	24.9
	4	31	11.9
Type of nursing school	Private	84	32.2
	Public	177	67.8
Location of nursing school	Urban	179	68.6
	Rural	82	31.4
Attendance to COVID-19 training	Yes	37	14.2
	No	224	85.8
Readiness to care for COVID-19 patients	Unprepared	45	17.2
	Somewhat unprepared	109	41.8
	Somewhat prepared	97	37.2
	Prepared	10	3.8
Willingness to care for COVID-19 patients	Absolutely not	10	3.8
	Probably not	31	11.9
	Unsure	106	40.6
	Probably yes	83	31.8
	Absolutely yes	31	11.9
		Mean	SD
Age (18–35)		20.70	2.59
Fear of COVID-19		20.34	6.05
Sleep quality		2.74	2.09
Intention to leave nursing education		2.09	1.16
Irritability		3.44	1.27

Abbreviation: COVID-19, coronavirus disease 2019.

Characteristics	Categories	Mean	SD	Test statistics	p Value
Gender[b]	Male	19.3265	5.59534	−1.382	0.171
	Female	20.5755	6.14894		
Year level[c]	1	21.4769	6.49545	2.737	0.044
	2	20.5900	5.85877		1>4
	3	20.0308	6.08525		
	4	17.8065	5.09522		
Type of nursing school[b]	Private	20.3452	6.44064	0.008	0.994
	Public	20.3390	5.88703		
Location of nursing school[b]	Urban	20.3799	5.93985	0.149	0.882
	Rural	20.2561	6.34562		
Attendance to COVID-19 training[b]	Yes	18.8378	6.53841	−1.528	00.133
	No	20.5893	5.95432		
Age[a]				−0.113	0.068
Readiness to care for COVID-19 patients[a]				−0.127	0.041
Willingness to care for COVID-19 patients[a]				−0.199	0.001
Sleep quality				−0.124	0.045
Irritability				0.201	0.001
Intention to leave nursing education				0.202	0.001

Abbreviation: COVID-19, coronavirus disease 2019.

[a]Pearson's r correlation.

[b]t test for independent group.

[c]Analysis of variance.

TABLE 3   Predictors of fear of COVID-19 among student nurses

Independent variables	B	SE	β	t	p Values	95% CI
(Constant)	24.102	1.324		18.209	0.000	21.495 to 26.708
Year level (R: first)						
Second	−0.718	0.946	−0.058	−0.759	0.449	−2.582 to 1.145
Third	−0.853	1.061	−0.061	−0.804	0.422	−2.941 to 1.236
Fourth	−3.053	1.317	−0.163	−2.319	0.021	−5.646 to −0.460
Readiness to care for COVID-19 patients	−0.210	0.526	−0.027	−0.400	0.690	−1.247 to 0.826
Willingness to care for COVID-19 patients	−1.030	0.433	−0.165	−2.378	0.018	−1.883 to −0.177

Note: $R^2 = 6.3\%$; $F = 3.328$; $p = 0.006$.

Abbreviations: β, standardized regression coefficient; CI, confidence interval; COVID-19, coronavirus disease 2019.

Based on the mean scores, there is moderate to high fear of COVID-19 among nursing students regardless of their year level; however, it is observed to be more evident among the first-year students. In other studies, it is also found that there is moderate to high fear of the virus among the general population,[24,25] healthcare personnel,[26,27] specifically among nurses[28] and nursing students.[12] The fear of COVID-19 is palpable in all sectors of the population. The mental health consequences of these pandemic made people fearful, anxious, emotionally unstable, and present traumatic stress symptoms of distraught that has even lead to suicide.[29–32]

There is a stark impact of COVID-19 among students in general. The literature revealed that COVID-19 has caused increased stress, anxiety, and depression among university students.[33,34] Conversely, in this study,

TABLE 4 Regression analysis on the influence of fear of COVID-19 on student nurses' outcomes

Independent variables	B	SE	β	t	p Values	95% CI
Sleep quality	−0.043	0.021	−0.124	−2.010	0.045	−0.085 to −0.001
Irritability	0.042	0.013	0.201	3.305	0.001	0.017 to 0.068
Intention to leave nursing education	0.039	0.012	0.202	3.312	0.001	0.016 to 0.062

Abbreviations: β, standardized regression coefficient; CI, confidence interval; COVID-19, coronavirus disease 2019.

the nursing student's fear of COVID-19 lead to several outcomes. For instance, we found that their fear is correlated to their feelings of unpreparedness and doubt whether to care for patients inflicted with COVID-19. This feeling of uncertainty may be due to their lack of training ($M = 20.58$, $SD = 5.95$) to equip themselves with enough knowledge and skills to boost their competence and confidence to care. Studies have shown that gaining enough knowledge and skills through training improved a nursing student's sense of competence to perform a task in clinical settings.[35,36] Another consideration is the finding of Henderson et al., (2016) who found that nursing students are not usually prepared to provide palliative care, which is the usual approach to care for COVID-19 patients because of the lack of scientifically established treatment and management as of the present time. Notably, based on our findings, freshmen nursing students appear to be more fearful of COVID-19 as compared to their counterparts. This finding is similar to the study conducted in Spain, where the first-year nursing students were found to be more fearful than their predecessors.[12] This can be explained by their susceptibility and their lack of experience in caring that takes place in the clinical nursing setting compared to students at higher levels. The care provided for COVID-19 patients is complicated because of the use of highly technical skills in life support, especially for those in intensive care. However, if students feel they have adequate knowledge, skills, and competencies, they tend to be more confident in providing care to their patients.[37,38] This explains why in our findings, the higher the level of student in the nursing program, the lesser are their fears. Nursing students who are in their fourth year appears to be less fearful compared to the first-year students because of the knowledge, skills, and caring experience they have earned in the nursing program.

Although willingness and readiness to care for COVID-19 patients is correlated to the student's fear, their willingness to care and being in their last year in the program are the only variables that predict fear of the virus. The regression analysis revealed that students who are less willing to care reported an increased fear of COVID-19. The unprecedented effect and the gravity of the infection and transmission, along with the increasing death toll, which has immensely affected the healthcare workers providing direct patient care adds to the students' preconceived fear that they too are vulnerable to the present hazardous environment. This can explain why less willing students show an increase in fear. Likewise, the lack of willingness to render services may also be attributed to the lack of training to properly equip them in caring for COVID-19 cases.

Health professionals, especially nurses who tend to patient at the bedside or even in the community setting, experience immense fear, which affects their psychological and emotional dispositions[39]; the same is true among nursing students. In fact, some universities in Europe that allowed nursing students in the frontline in caring for critically ill patients received negative feedback on risking the health and safety of their students.[40] The fear of COVID-19 is universal and is also true to nursing students who are pushing in their clinical placement in these time of public health crisis.

Based on the findings of this study, the nursing students increased fear of COVID-19 is associated with their psychological manifestations of high irritability and poor sleep quality. Studies have well supported that extreme fear affects a person's psychological well-being, which may lead to feelings of anxiety and reduced sleep quality, as well as irritability.[41,42] When a person is in fear, it leads to emotional instability, which affects the sleep physiology;[43] hence the evident poor sleep quality among the nursing students. Irritability and poor sleep quality are two of the most common signs of mental disturbance due to a stressor,[44,45] which, in this case, is their fear of COVID-19.

Another remarkable finding of this study is the students' intention to quit nursing school because of their fear of COVID-19. This finding contrasts with the report of Dewart et al.,[14] who mentioned that nursing students are willing to care for COVID-19-inflicted patients to finish their nursing degree program. The results of our study are similar to Dos Santos,[46] who found that students do not want to continue their education in nursing because of the pandemic. The fear of COVID-19 influences the students desire to quit nursing because of the current reality of a risky environment and that a nursing job entails self-sacrifice. The rapidly changing protocols, lack of established treatment, issues in the lack of PPEs, physical and emotional burden, health worker discrimination, as well as the increasing number of infection and death of nurses in the frontline may cause anxiety to a nursing student, especially when they are in their primary years. They lack the basic knowledge and skills in caring and lacks the maturity to imbibe the professional value of altruism, empathy, and service in nursing; for this reasons, they tend to be fearful and intend to quit nursing school.

The presence of stress manifestations of irritability and sleep disturbance may pose a threat not only to the students' academic performance but also to their mental health. Several scholars have agreed on the negative impact of stress-related signs on student learning, mood, and general well-being.[47,48]

5 | STUDY LIMITATIONS

This study has several limitations. First, is the research design used, which limits the causal relationship of the variables of the study. Generalizability issues are also raised because of the limited sample of participants included. Future researchers are encouraged to gather a bigger sample size to derive more generalized findings. A qualitative assessment of students' fear and its implication on their mental health and schooling may be useful to amplify and better describe their lived experience with the COVID-19 pandemic.

6 | CONCLUSION

This study revealed that the fear of COVID-19 is common among nursing students but is more evident in the first year of the program. Although students' fear is correlated to their willingness and preparedness to care for patients with COVID-19, the willingness factor predicts their fear of the virus. We also conclude that the students fear of COVID-19 predicts their psychological disposition of increased irritability, poor sleep quality, and intention to quit nursing school.

7 | IMPLICATIONS TO PSYCHIATRIC NURSING PRACTICE

The COVID-19 pandemic presented a multitude of physical and mental health among different sectors. It cannot be denied that the students are currently perturbed by the stress brought by this pandemic. Teachers have a vital role to play in implementing conscientious, supportive, teaching-learning strategies for learning while safeguarding their students mental and psychological health. Lovrić et al.[16] found in their study that supportive teachers are helpful among disturbed students who are not able to concentrate and learn their concepts. Likewise, it is also necessary to imbed and implement disaster topics in the nursing curriculum as it is found to increase students' knowledge and emotional preparedness in emergencies, such as disasters and pandemic[49–51]

The impact of the pandemic made nursing students anxious and fearful in providing their caring service. Caring as the heart of nursing should not be selective and discriminatory; however, the unprecedented effect of virus outweighs the need for self-preservation, and the imposition of a safe learning environment for these students. School administrators should be able to address this issue in a professional and unbiased manner, balancing between the need for an actual learning experience and humanitarian service, as well as ensuring the safety of their students while learning.

School administrators must also come up with strategies to address the students' psychological needs to reduce their fear of COVID-19. This may include mindfulness-based interventions to increase resiliency and stress debriefing exercises. They can do psychological first aid activities and implement this together with their courses to keep the students feel involved, connected, and secured. Psychological manifestations of irritability and alteration in sleep pattern are not only unhealthy but are hindrances to learning. The high sense of intention to leave nursing school brought about by the fear of COVID-19 entails attention and action. The nursing students we have now are our future healthcare workers, which is why it is important to nurture them in this time of the pandemic.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interests.

AUTHOR CONTRIBUTIONS

Janet Alexis A. De Los Santos, Leodoro J. Labrague, and Charlie C. Falguera provide substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; drafting the article or revising it critically for important intellectual content. Janet Alexis A. De Los Santos, Leodoro J. Labrague, and Charlie C. Falguera approved the final version to be published.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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