Anxiety and Coping Strategies of Nursing Students during COVID-19 Pandemic in selected Nursing Campuses

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ABSTRACT

Anxiety is highly prevalent among nursing students even in normal circumstances. The objective of this study was to assess levels of anxiety and ways of coping among nursing students on the selected campuses.

A cross-sectional study was conducted among 215 students of Bachelor level in two nursing campuses from October to December 2020. Anxiety levels were assessed using the Generalized Anxiety Disorder 7-Item Scale. The study found that the prevalence of mild, moderate, and severe anxiety was 45.6%, 25%, and 13% respectively. Age of the participants, Nursing Programme, and type of family were significantly associated ($p < 0.05$) with the level of anxiety however, other socio-demographic factors were not found associatedwith anxiety level. Moderate and Severe level of anxiety was found significantly high among students below the age of 20 years, BSc. Nursing students and joint family respectively. The students' coping strategies were strictly using personal protective measures (94.9%), doing relaxation activities (81%), chatting with and getting support from family and friends (79.5%), and praying, worshiping, and engage in spiritual work by 42.3%. about one-third (28.4%) get help from doctors to reduce stress and 7% vent emotions by crying and screaming.

The majority of the nursing students had mild anxiety during the COVID-19 pandemic and majority ofthem used at least one coping strategy for the anxiety.

Keywords: Anxiety, Coping Strategy, Covid-19, Pandemic, Nursing students.

INTRODUCTION

The world has been facing the COVID-19 pandemic since December 2019. Nursing students are in close contact with the patients in providing continuous care during their clinical placement. Today everyone is thankful to all corona warriors; especially nurses because they are working round the clock, isolating themselves from their families, placing them self at risk, to fight against this pandemic. We have seen exceptional overwork by nurses directly involved in the response to the COVID-19 pandemic. Nurses play a vital role in the healthcare system and medical team. Nurses are the front-line fighters against the COVID-19 pandemic, providing support and services to patients to prevent and control the outbreak.

During n epidemic/pandemic, national nursing students are bare to further stressful factors. In a study conducted in Saudi Arabia during the 2016 MERS outbreak, healthcare students stated their reluctance to work in healthcare facilities with insufficient MERS infection control isolation policies. [1]

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Nursing education has been constantly associated with anxiety among students. Heavy course loads, stringent examinations, continued pressure to attain a high-grade point average,complex interpersonal relationships, challenges of the clinical environment,caring for chronic and terminally ill patients results in greater anxiety among nursing students than among students from any of the other healthcare disciplines. [2,3,4]. Anxiety has a negative outcome on the quality of students' lives, their education, and clinical practice. [5]

Nursing students are the upcoming health care providers, their quality training and teaching will absolutely affect the outcomes. [6] This study utilized an online survey-based study with the objective of assessing the Anxiety and coping strategies for COVID-19 among nursing students.

MATERIALS AND METHODS

Study Design: Descriptive cross-sectional research design was used to assess the anxiety and coping strategies of nursing students during the COVID-19 Pandemic.

Settings /Subjects: The study was conducted among bachelors' level nursing students studying at Maharajgunj nursing campus of Tribhuvan University and College of Medical and Allied Health Science of Purbanchal University. Non-probability, convenient sampling method was used to select the sample. Total 215 students were recruited from October to December 2022.

Inclusion Criteria: Only bachelor's level nursing students studying in Maharajgunj Nursing campus of Tribhuvan University and College of Medical and Allied Sciences of Purbanchal University who were interested to engage in the study with internet access and, who have completed the online survey were considered.

Ethical Consideration: Permission to undertake the research study was granted by Nepal health Research Council. The principle of human dignity and justice was maintained

and informed consent was obtained. Respondents' privacy was protected to the fullest extent possible. Participants were not obligated to participate and had the option to withdraw at any time.A brief introduction describing aims, processes, the voluntary nature of participation, and a pledge of confidentiality and anonymity appeared on the questionnaire's cover page.

Data Collection Tool: The set of Standard tools GAD-7 developed by Spitzer et al. 2006 was used to assess anxiety. [7] The Cornbrash's alpha value of the scale was 0.85 as mentions by Johnson et al. [8]The Generalized Anxiety Disorder-7 Scale (GAD-7) is composed of 7 items. They are 4-point Likert-type items. Scores from 0 to 4 indicate a minimal level of anxiety. Scores from 5 to 9 indicate a mild level of anxiety. Values between 10 and 14 indicate moderate anxiety, whereas scores between 15 and 21 indicate severe anxiety. To find out the coping technique, researchers designed questions based on literature review. It was an organized and self-administered online survey. The tool's content validity was maintained by engaging subject experts and conducting the literature study. The study instrument was pre-tested in 10% of the sample size, and no changes were required following pre-testing.

Data Collection Procedure: Students were determined using the convenience method who answered the online survey developed through Google forms with an appended consent form. The survey link was sent to the students via various social media. The participants could view the questions and answers by simply clicking on the link, which took about 15 to 20 minutes to complete.

Data Analysis Procedure: Collected data were entered in Statistical Package for Social Sciences (SPSS) version 16 for analysis. Data analysis was done by using descriptive and inferential statistics (chi-squares test and fisher's exact testwere used for show the association between independent and dependent variables) and presented in table.

RESULTS

Out of 215 nursing students (Table1) mean age and standard deviation was 23.42 ± 3.534 and ranged from 19 to 41 years. More than half were Bramin/Kshitri (64.7%) Similarly, about half (44.7%)) reside in the municipality. Regarding the study programme, 51.6% were studying Bachelor in Nursing (BNS). Three fourth (75.3%) of the students were unmarried and 79% were livingin a nuclear family. About half (44.7%) of the students' family members had been diagnosed with chronic illness and very few of the students (4.2%) had been diagnosed COVID-19 in the family.

On the COVID-19 (Table 2), over half of the students (44.2%) said they had been nervous, anxious, or on edge for several days (Table 2). Not at all was given by 50.7 percent of participants as the reason for not being able to halt or manage worrying, followed by 33 percent many days and 8.4 percent virtually every day. 10.2 percent of respondents said they worried too much about different topics almost every day, and 26.5 percent said they had problems relaxing. For several days, one-third of the participants (34.9%) said they are easily angered or angry, and 36.7 percent said they are frightened that something bad may happen for several days.

While calculating overall score on Anxiety level (Table 3), 45.6% of participants had mild level ofanxiety followed by Moderate

Table 1: Socio-demographic characteristics of the nursing students(n=215)

Characteristics	Number	Percentage
Age (in completed years)		
< 20	22	10.2
21-25	112	52.0
>25	81	37.7
Mean age ±S.D = 23.42 3.534		
Ethnicity		64.7
Brahmin/Chhetri	139	17.7
Janajati	38	9.8
Newar	21	2.8
Dalit	6	5.1
Terai Madhesi	11	
Programme		51.6
BNS	111	48.4
BSc Nursing	104	
Marital Status		75.3
Unmarried	162	24.7
Married	53	
Residence		31.6
Metropolitan city	68	14.0
Sub Metropolitan City	30	44.7
Municipality	96	9.8
Rural Municipality	21	
Type of Family		79.1
Nuclear	170	20.9
Joint	45	
Chronic illness In Family		44.7
Yes	96	55.3
No	119	
COVID-19 Infection in Family		4.2
Yes	9	95.8
No	206	

Table 2: Students' anxiety during COVID-19 pandemic(n=215)

Statements (Within 2 Weeks)	Participants Responses			
	Not at all N (%)	Several days N (%)	Over half the day's N (%)	Nearly every day N (%)
Feeling nervous, anxious, or on edge	83(38.6)	95(44.2)	19(8.8)	18(8.4)
Not being able to stop or control worrying	109(50.7)	71(33.0)	17(7.9)	18(8.4)
Worrying too much about different things	96(44.7)	81(37.7)	16(7.4)	22(10.2)
Trouble relaxing	129(60.0)	57(26.5)	16(7.4)	22(10.2)
Being so restless that it's hard to sit still	160(74.4)	34(15.8)	11(5.1)	10(4.7)
Becoming easily annoyed or irritable	107(49.8)	75(34.9)	18(8.4)	15(7.0)
Feeling afraid as if something awful might happen	95(44.2)	79(36.7)	21(9.8)	20 (9.3)

(25.0%) and severe (13%) level of anxiety, and the remaining 16.4% had a minimal level of anxiety.

Coping is broadly defined as the conscious or unconscious cognitive and behavioral strategies an individual employ to manage stress.When asked about students' coping strategy during COVID-19 (Table 4), 94.9 percent said they used strict personal protective measures, followed by avoid going outside (92.6 %), reading about COVID-19,its prevention and mechanism of transmission, while very few portion (7%) vent emotion

Table 3: Anxiety level of the students (n=215)

Anxiety Level	Number	percentage
Minimal (Score 0 to 4)	35	16.3
Mild (score 5 to 9)	98	45.6
Moderate (score 10 to 14)	54	25.1
Severe (score 15 to 21)	28	13.0

Table 4: Coping Strategy Adopted by the students (n=215)

Coping Strategies	Number	Percentage
Follow strict personal protective measures (e.g., mask, hand washing, etc.)	204	94.9
Avoiding going out in public places to minimize exposure from COVID-19	199	92.6
Reading about COVID-19, its prevention and mechanism of transmission	181	84.2
Do relaxation activities, for example, involved in meditation, sports, exercise, music, etc.	175	81.4
Chat with family and friends to relieve stress and obtain support	11	79.5
Use social media and social networks such as Facebook, Twitter, tiktok, YouTube, etc.	161	74.9
Try to be busy at home in activities that would keep my mind away from COVID-19	161	74.9
Talk and motivate myself to face the COVID-19 outbreak with a positive attitude	142	66.0
Praying, worshiping and engage in spiritual work.	91	42.3
Play online games and computer games	68	31.6
Get help from family physicians or other doctors to reduce stress and get reassurance	61	28.4
Avoid media news about COVID-19 and related fatalities	55	25.6
Vent emotions by crying, screaming, etc.	15	7.0

by crying, screaming etc. followed by avoid media news about COVID-19 (25.6%) and related fatalities as well as get help from family physicians or other doctors to reduce stress and get reassurance (28.4%).

The study found that the students' anxiety level was significantly associated with age of the students (p= 0.002), Nursing Programme (p=0.011) and type of family (p=0.004). However, other socio demographic factors were not found associated with anxiety (Table 5).

DISCUSSION

In nursing, the topic of stress has gotten more attention which is evident in various literatures.

The prevalence of minimal, mild, moderate, and severe anxiety during COVID-19 among nursing students was found to be16.3%, 45%, 25%, and 13% respectively in this study. This finding varies from the study conducted in Ashkelon Academic College; Southern District, Israel which presented the prevalence of moderate and severe anxiety as 43% and 13% respectively. [9] Such a variation in the level of anxiety may be due to the timing of the study.The current study was conducted after ten months of the emergence of the pandemic however the study conducted in Israel was during the third week of lockdown. According to previous studies, even in normal

Table 5: Association between students' anxiety level and Selected Variables(n= 215)

Variables	Level of anxiety				χ2 Value	P-value
	Minimal No.(%)	Mild No.(%)	Moderate No.(%)	Severe No.(%)		
Age (in complete years)						
< 20	4(18.2)	4(18.2)	8(36.4)	6(27.3)	19.450	.002*€
21-25	13(11.6)	52(46.4)	35(31.3)	12(10.7)		
>25	18(22.2)	42(51.9)	11(13.6)	10(12.3)		
Marital Status						
Married	9(17.0)	29(54.7)	9(17.0)	6(11.3)	3.319	.345
Unmarried	26(16.0)	69(42.6)	45(27.8)	22(13.6)		
Nursing Programme						
BNS(bachelor in Nursing)	23(20.7)	57(51.4)	19(17.1)	12(10.8)	11.165	.011*
BSC nursing	12(11.5)	41(39.4)	35(33.7)	16(15.4)		
University						
Tribhuvan University	27(17.0)	73(45.9)	40(25.2)	19(11.9)	.740	.864
Purbanchal University	8(14.3)	25(44.6)	14(25.0)	9(16.1)		
Type of Family						
Nuclear	32(18.8)	79(46.5)	44(25.9)	15(8.8)	12.919	.004*€
Joint	3(6.7)	19(42.2)	10(22.2)	3(28.9)		
Chronic illness in family						
Yes	14(14.6)	46(47.9)	24(25.0)	12(12.5)	.551	.907
No	21(17.6)	52(43.7)	30(25.2)	16(13.4)		
Place of Residence						
Metropolitan city	13(19.1)	31(45.6)	15(22.1)	9(13.2)	4.745	.577
Sub metro Politian City	4(13.3)	13(43.3)	6(20.0)	7(23.3)		
Municipality and rural municipality	18(15.4)	54(46.2)	33(28.2)	12(10.3)		
COVID-19 infection in family						
yes	1(11.1)	5(55.6)	1(11.1)	2(22.2)	1.747	
No	34(16.50	93(45.1)	53(25.7)	26(12.6)		

Level of significance at <0.05,   χ2chi square test,   € fisher's' exact test

conditions, students experience anxiety. In Hong Kong, 12.2% of university and college students had moderate anxiety and 5.8% had severe anxiety; in Portugal, 15.6 percent had moderate anxiety and 8.3 percent had severe anxiety; and in Australia, 17.5 percent had moderate anxiety and 8.3 percent had severe anxiety.[10, 11, 12] The prevalence of moderate anxiety among medical students was 25% in the UK, 20% in North America, 13.7 percent in New Zealand, and 23% in Lebanon.[13] Likewise, the study conducted in College of Medical Applied Sciences Mohali Asser-King Khalid University showed that there is a prevalence of mild and moderate anxiety which is consistent with the findings of this study.[14]

In this study, participants were asked for their coping strategy during the COVID-19 pandemic, among all respondents; 94.9% mentions that they were followed strict personal protective measures followed by avoiding going outside (92.6%), doing relaxation activities (81.4%), chatting with family and friends and obtain support (79.5%), Use social media (74.9%), Try to motivate self with a positive attitude (66.0%), prying, worshiping and engage in spiritual work (42.3%), and get help from doctors to reduce stress (28.4%) while 7% vent emotion by crying and screaming. The findings of the study in Turkey which showed that the least commonly used coping strategy was exercising (38.6%) and the most commonly used anxiety coping strategy was spending time on the internet (77.8%).[15]Qualitative and quantitative studies have found that the reasons for increased internet usage were: More online conversations with family and friends because of social isolation, boredom, increased homework because of distance learning and trying to get more information about COVID-19.[16,17]

CONCLUSIONS

Anxiety was present in most of the nursing students during COVID19. The anxiety of nursing students during the COVID-19 pandemic was found at a mild level in nearly half of the students; however, some students stated severe anxiety. The most strategies that were used to cope with anxiety were using protective measures, following relaxation techniques, and getting support from family and friends as well as involvement in religious work. Anxiety can affect the health of nursing students so recognizing the needs of the students during COVID-19 and developing interventions to lessen the possible anxiety and adopt adaptive coping strategies will be helpful to reduce mental health problems accompanying with the pandemic.

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