



**ANXIETY RELATED TO CLINICAL EXPOSURE DURING COVID-19 PANDEMICS  
AMONG NURSING STUDENTS OF KATHMANDU VALLEY**

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Article Received on 25/05/2021

Article Revised on 30/05/2021

Article Accepted on 31/05/2021

**ABSTRACT**

Coronavirus disease 2019 (COVID-19) is a public health emergency which is spreading all over the world. Frontline health care providers who are facing tremendous psychological distress that has traumatic experience for nurses globally. Nursing students as part of the frontline health workers has highly prevalent of anxiety in normal circumstances also. But this pandemic led to a strong reactions among nursing students who experiences anxiety. Hence, this study aimed to assess the Anxiety Related to Clinical Exposure during COVID-19 Pandemics among Nursing Students of Kathmandu Valley. **Methods:** Descriptive, Cross-sectional study research design was used to assess the anxiety related to clinical exposure during COVID-19 pandemics among 216 nursing students of Kathmandu Valley through the probability lottery sampling technique from 29<sup>th</sup> April to 11<sup>th</sup> May 2021. A self-administered structured standard GAD-7 questionnaire was used as a tool for data collection. Data were analysed in SPSS version 20 where descriptive statistical methods in terms of frequency, percentage, mean, standard deviation whereas median, Mann- Whitney U test and the Kruskal-Wallis test were used for comparison. Likewise, Pearson's correlation was used for the relationship of level of anxiety and COVID Stressor. **Results/ Finding:** The result showed 41.67% had a mild level of anxiety, 18.98% had a moderate level of anxiety, 8.80% had a severe level of anxiety whereas 30.56% are normal among the respondents. However, there was a significant relationship between anxiety level and COVID stressors among nursing students. Besides, there were significant differences in respondent's median anxiety score regarding anxiety with education, training, and COVID Stressors of nursing students. **Conclusion:** Despite the challenging situation of the pandemic, this study reveals that the majority of respondents had a mild level of anxiety regarding exposure to COVID-19. However, training related to preventive measures, adequate supply of personal protective equipment and frequent assessment of mental status should be done to undergraduate students to protect them from the psychological burden of COVID-19 pandemic.

**KEYWORDS:** COVID-19, Anxiety, Nursing Students, Pandemics.

**INTRODUCTION**

The COVID-19 is fatal- health-threatening emergence and spread of 2019 novel coronavirus (2019-nCoV) or the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the major public concern all over the world.<sup>[1]</sup>

It is highly infectious caused by the newly identified coronavirus experiencing mild to moderate respiratory illness which is transmitted through the droplet infection when infected people cough and sneezes.<sup>[2]</sup>

The World Health Organization (WHO) stated Novel coronavirus as a public health emergency on January 30<sup>[3]</sup> and named COVID19 on February 11, 2020.<sup>[4]</sup> The coronavirus COVID-19 is affecting 221 countries and territories around the world and infected more than 132,442,204 people, including 2,874,556 deaths on 6th April 2021. In context to Nepal 278,210 have been infected and 3,036 have died.<sup>[4]</sup>

In southeast Asia, 173 159 cases are infected and 5 347 were dead.<sup>[6]</sup> On January 13, 2020, the first case was

detected in Nepal, with a positive history of travel from the COVID-19 epicenter and he was investigated for COVID-19 and tested positive for COVID-19.<sup>[7]</sup>

Due to the rapid expansion of COVID-19, education institutions had closed to prevent transmission of the virus. Following the lockdown in India, Nepal introduced a nation-wide lockdown, 2 months after the appearance of the first case and after that educational institutions are completely closed.<sup>[8,9]</sup>

Despite lockdown, there is virtual learning which is running all over the country. The uncertainty of the virus enhances growing cases, fear, worry, and stress which are normal responses to threats. So it is understandable that people are experiencing fear in the context of the COVID-19 pandemic.<sup>[10,11]</sup> Several studies suggest that there has been a psychological impact of the epidemic on the general public, patients, medical staff, children, and older adult.<sup>[12]</sup> Some studies revealed that large proportions of - students have experienced elevated stress and anxiety.<sup>[13]</sup> Anxiety is highly prevalent among college students which may be due to academic performance, pressure to succeed, and post-graduation plans.<sup>[14]</sup>

Nursing students are the future frontline health care providers who are facing tremendous pressure and psychological distress. Heavy course loads, examinations, pressure to attain a high grade,<sup>[15]</sup> complex interpersonal relationships, challenges of the clinical environment<sup>[16]</sup> caring for chronic and terminally ill patients<sup>[17]</sup> result in greater anxiety among nursing students than among students from any of the other healthcare disciplines. Furthermore, it has been found that the clinical training taking place during nursing education is more stressful than the theoretical aspect which may be due to increased cases and deaths, inadequate personal protective equipment, vulnerability to infection can contribute to the mental burden.<sup>[18]</sup>

In the context of Nepal, Colleges re-opened after the lockdown in December 2020. After it, clinical posting resumed for nursing students.<sup>[19]</sup> It poses a challenge for the nursing students to face the threat of morbidity and mortality and tackle the psychological burden.<sup>[20]</sup>

Timely assessment of mental health status and mental health needs of nursing students during emergencies will help the management of psychological distress and meet patient's needs. Thus, this study aimed to evaluate "Anxiety Related to Clinical Exposure during COVID-19 Pandemics among Nursing Students of Kathmandu Valley".

## METHODOLOGY

A Descriptive, Cross-sectional study was conducted in two nursing colleges of Kathmandu valley from 29th April to 11th May 2021. The non-probability convenience sampling technique was used to select a

nursing college and undergraduate students were included by using the probability lottery method. A self-administered structured standard GAD-7 questionnaire was used to assess socio-demographic information, anxiety. Data was collected by the researcher herself by using structured, online self administered questionnaire in English version. The questionnaires were made available online through Google form. The link of the questionnaire was sent through social media (Facebook, messenger and viber) to the contacts from the investigators. A consent form was attached before our questionnaire. A written approval was taken before data collection and the participants were directed to the socio-demographic information, then information related to anxiety related questionnaire respectively. The period of data collection was 2 weeks.

## Validity and Reliability

Were established by consulting an extensive review of the literature, consulting expert, and validated GAD-7 tool was used which demonstrated excellent internal consistency which is also used in previous research in Kathmandu University, Nepal. Descriptive statistical methods in terms of frequency, percentage, mean, standard deviation were used to describe demographic data whereas median, Mann- Whitney U test and the Kruskal-Wallis test were used for comparison. Likewise, Pearson's correlation was used for the relationship of level of anxiety and COVID Stressor.

The GAD-7<sup>21</sup> includes seven items based on seven core symptoms and inquires the frequency with which respondents suffered from these symptoms within the last two weeks. Respondents report their symptoms using a 4-item Likert rating scale ranging from 0 (not at all) to 3 (almost every day), such that the total score ranges from 0 to 21. The GAD-7 is a well-validated screening instrument, and it has demonstrated excellent internal consistency (Cronbach's  $\alpha = 0.911$ )

Gad-7 score	Severity
0-5	None
6-10	Mild
11-15	Moderate
16-21	Severe

A formal approval letter was taken from the concerned authority of Norvic Institute of Nursing Education (NINE) and B & B Medical Institute (BMI), Kathmandu. Ethical approval was taken from Nepal Health Research Council (NHRC). The objective of the study was explained to respondents through online method due to lockdown all over the country and written consent was taken from each respondent before data collection.

## FINDINGS/RESULTS

The demographic characteristics are represented in Table 1. In this study, there were 216 bachelors nursing students in which more than half of the respondents 64.81% belonged to the age group of 21-25 years and only 2.31 % of respondents were from >31 years of age

group. The majority of respondents 77.78% were unmarried. Among them, 50 % of respondents had a Bachelor Science of in Nursing whereas 50% had a Bachelor of Nursing. The majority of the respondents 76.39% were from urban and only 23.61% were from

rural area. Besides this, nearly two-third of respondents 77.80% belong to Joint family whereas 22.25% belongs to Nuclear family. More than half of the respondents 60.19% were staying in their own home while 13.43% were living in a hostel.

**Table 1: Socio-demographic characteristics of participants.**

**n = 216**

Variables	Frequency	Percent
<b>Age (in years)</b>		
<20	42	19.44
21-25	140	64.81
26-30	29	13.43
>31	5	2.31
Mean± SD: 1.98 ± 0.65		
<b>Gender</b>		
Female	216	100.00
<b>Marital Status</b>		
Married	48	22.22
Unmarried	168	77.78
<b>Education</b>		
Bachelors of Nursing	108	50.00
Bachelors Science of Nursing	108	50.00
<b>Area of Origin</b>		
Rural	51	23.61
Urban	165	76.39
<b>Living Condition</b>		
Hostel	29	13.43
Rented	57	26.39
Own House	130	60.19
<b>Live with Parents</b>		
Yes	58	26.85
No	158	73.15

**Table 2: Socio-demographic characteristics of participants.**

**n = 216**

Variables	Frequency	Percent
<b>Steady Income</b>		
Yes	188	87.00
No	28	13.00
<b>Socioeconomic Condition</b>		
Upper	4	1.85
Middle	211	97.69
Lower	1	0.46
<b>Religions</b>		
Hindu	198	91.67
Buddhist	13	6.02
<b>Ethnic Group</b>		
Brahmin	59	27.31
Dalit	2	0.93
Chetri	67	31.02
Janagati	88	40.74
<b>Training</b>		
Yes	137	36.57
No	79	63.43
<b>Types of training</b>		
Online	61	28.24
Complete training	38	17.59

Incomplete training	39	18.06
<b>Provision of PPE</b>		
Yes, but not adequate	136	62.96
Yes, adequate	54	25.00
No	26	12.04

The remaining part of sociodemographic characteristics table 2 illustrates more than two-third of respondents 73.15% stay alone while only 26.85% of respondents stay with parents. Among them, the majority of the 87% had a steady income. Almost all 97.69% were from middle-class families. Likewise, almost all 91.67% were from the Hindu religion. More than one-third 40.74% were from Janajati whereas only 0.93% were from Dalit

ethnic group. However, nearly one-third of respondents 36.57% were trained in COVID whereas nearly two-thirds of respondents 63.43% did not receive training. Besides this 28.24% had online training and only 18.06% had incomplete training. Likewise, more than half of the respondents 62.96% had provision of PPE and only 12.04% had no provision of PPE.

**Table 3: COVID-19 related stressors.**

<b>n = 216</b>		
<b>COVID Stressors</b>		
Worry about economic influences	13	6.02
Worry about the academic delay	103	47.69
Worry about influences on daily life	96	44.44
Social support	4	1.85

Table 3 shows that nearly half of the respondents 47.69% had worry about the academic delay on COVID stressors and only 1.85% had stress on social support too.

**Table 4: Level of anxiety among respondent**

<b>n=216</b>		
<b>Level of anxiety</b>	<b>Frequency</b>	<b>Percent</b>
Normal / None (0-5)	66	30.56
Mild (6-10)	90	41.67
Moderate (11-15)	41	18.98
Severe (16-21)	19	8.80
Severe (16-21)	19	8.80

Table 4 illustrates that more than one-third of respondents (41.67%) had a mild level of anxiety whereas (8.80%) had a severe level of anxiety among respondents.

**Table 5. Correlation between Level of Anxiety and COVID Stressors**

<b>n=216</b>		
<b>Variables</b>	<b>COVID Stressors</b>	<b>Anxiety level</b>
<b>COVID stressors</b>	1	.179
		.008
	216	216
<b>Anxiety level</b>	.179	1
	.008	
	216	216

Note: Correlation is significant at the 0.01 level (2 tailed)

Table 5 shows that there was a significant relationship between anxiety level and COVID stressors among nursing students as  $p = 0.008$  and  $r = 0.179$

**Table 6. Differences in Respondents Socio-demographic Variables with Level of Anxiety: Age Group, Marital Status, Education, Area of Origin, Types of Family, Living Condition, Live with Parents, Steady Income, Socioeconomic Condition.**

n =216

Variables		Total Score of Anxiety			p-value
		Median	Percentile 25	Percentile 75	
Age group	<20	6.50	4.00	9.00	0.181 <sup>a</sup>
	21-25	7.50	5.00	11.00	
	26-30	8.00	6.00	13.00	
	>31	6.00	5.00	8.00	
Marital status	Married	7.00	5.00	10.50	0.73 <sup>b</sup>
	Unmarried	7.00	5.00	11.00	
Education	Bachelor of Nursing	8.00	5.50	12.00	0.04 <sup>b</sup>
	Bachelors Science of Nursing	7.00	5.00	10.00	
Area of origin	Rural	8.00	5.00	11.00	0.39 <sup>b</sup>
	Urban	7.00	5.00	11.00	
Type of family	Nuclear	7.00	5.00	11.00	0.86 <sup>b</sup>
	Joint	8.00	5.00	10.00	
Living condition	Hostel	8.00	6.00	13.00	0.21 <sup>a</sup>
	Rented	8.00	5.00	11.00	
	Own House	7.00	5.00	10.00	
Live with parents	No	8.00	5.00	13.00	0.11 <sup>b</sup>
	Yes	7.00	5.00	10.00	
Steady Income	No	7.50	6.00	12.00	0.37 <sup>b</sup>
	Yes	7.00	5.00	11.00	
Socioeconomic Condition	Upper	5.00	2.50	6.00	0.15 <sup>a</sup>
	Middle	7.00	5.00	11.00	
	Lower	10.00	10.00	10.00	

Note: a: Kruskal- Wallis test; b: Mann- Whitney test (Significant p value:0.05)

Table 6 reveals that there were significant differences in respondent's median anxiety score regarding anxiety with education at a p-value of 0.04.

**Table 7: Differences in Respondents in Socio-demographic Variables with Level of Anxiety: Religion, ethnic group, Training, Types of Training, Provision of PPE, COVID Stressors.**

n =216

Variables		Total Score of Anxiety			p-value
		Median	Percentile 25	Percentile 75	
Religion	Hindu	7.00	5.00	11.00	0.19 <sup>a</sup>
	Buddhist	5.00	4.00	8.00	
	Christian	9.00	3.00	16.00	
Ethnic Group	Brahmin	7.00	5.00	9.00	0.26 <sup>a</sup>
	Dalit	10.00	8.00	12.00	
	Chetri	8.00	5.00	11.00	
	Janajati	8.00	5.00	11.50	
Training	No	7.00	5.00	10.00	0.05 <sup>b</sup>
	Yes	8.00	5.00	12.00	
Types of Training	No	7.00	5.00	10.00	0.09 <sup>a</sup>
	Online	7.00	5.00	10.00	
	Complete Training	9.00	6.00	13.00	
	Incomplete Training	8.00	5.00	13.00	
Provision Of PPE	No	7.50	5.00	12.00	0.47 <sup>a</sup>
	Yes, but not adequate	7.50	5.00	11.00	
	Yes, adequate	7.00	5.00	9.00	
COVID stressors	Worry about economic influences	7.00	2.00	8.00	0.01 <sup>a</sup>
	Worry about the academic delay	7.00	5.00	9.00	
	Worry about the influence on daily life	8.00	6.00	13.00	
	Social support	9.50	6.50	12.50	

Note: a: Kruskal- Wallis test; b: Mann- Whitney test (Significant p value:0.05)

Table 7 displays that there were significant differences in respondent's median anxiety score regarding anxiety with training and COVID Stressors at the p-value of 0.05 and 0.01 respectively.

## DISCUSSION

The COVID-19 outbreak is one of the most challenging threats to national and international public health. The pandemic has had a major impact in all sectors, especially on the health sector. Initially, healthcare students were placed in a stressful situation due to uncertainty regarding the transmission of the disease, fear, and implementation of rigorous disease control protocols. Similarly, many health professionals were exposed to similar stressors, which could also affect their academic achievements and negatively influence their learning, which causes a higher level of anxiety.<sup>[12]</sup>

In this study, one-third of respondents (41.67%) had a mild level of anxiety, 18.98% had a moderate level of anxiety, (8.80%) had a severe level of anxiety whereas 30.56% are normal among the respondents.

This study is supported by Cao<sup>[12]</sup> 0.9% of the respondents were experiencing severe anxiety, 2.7% moderate anxiety, and 21.3% mild anxiety. A similar study which is conducted in the United States of America college students by Perz<sup>[13]</sup> showed that more than half of the respondents 58% had reported mild anxiety. This may be due to living with their family, supporting the family with a steady income as well as provision of PPE adequately too.

In contradicting the study done by Savitsky<sup>[22]</sup> stated that the prevalence of moderate and severe anxiety during the COVID-19 pandemic was 43% and 13% respectively.

Besides this, another contradicting study was done by Temiz<sup>[23]</sup> also reveals that 32.3% of the students had mild anxiety, 40.5% had moderate anxiety, 22.5% had high anxiety, and 4.7% had severe anxiety during the COVID-19 pandemic. This may be due to the economic uncertainty, fear of infection, challenges of distance education, lack of personal protection equipment at work.

A study conducted by Savitsky<sup>[22]</sup> showed that Lack of PPE among working students was found associated significantly with a higher anxiety score in comparison with those students who did not experience a lack of PPE at work (median = 11.0, IQR: 8.0–13.5 and median = 6.0, IQR: 2.5–10.0 respectively) (p-value = 0.019), had supported to this study as in this study majority of respondents had higher anxiety level due to inadequate PPE as compare to adequate provision of PPE.

Anxiety is highly prevalent among nursing students even in normal circumstances. During the pandemic, the education pattern of nursing students has been modified, by multiple educational solutions based on virtual

learning rather than face-to-face learning<sup>[24]</sup> which is also the new emerging challenge along with COVID Pandemic.

In this study, there was a significant relationship between anxiety level and COVID stressors among nursing students as  $p = 0.008$  and  $r = 0.179$ . In COVID Stressors includes worry about economic influences, worry about the economic delay, influence in daily life, and social support. Similarly, a study done by Cao<sup>[12]</sup> had supported this study as there is a positive association between the effect on daily life, as well as delays in academic activities, and anxiety. However, social support was negatively correlated with the level of anxiety ( $P < .001$ ) which is contradicting to this study.

Similarly, another contradicting study done by Temiz<sup>[23]</sup> had revealed that there was a significant negative relationship between the self-confident approach, seeking social support, and anxiety levels ( $p < 0.01$ ).

Besides this same study had supported this study as there was a positive relationship between the stressors related to COVID-19, including economic, social life, family and health issues, and anxiety.

In this study, there were significant differences in respondent's median anxiety score regarding anxiety with education, training, and COVID Stressors of nursing students at p-value 0.04, 0.05, and 0.01 respectively.

In a contradicting study done by Temiz<sup>[23]</sup> the differences of age, gender, year of study were not significant ( $p > 0.05$ ). The median value of the anxiety score of students living in the Marmara region was the highest (8.0), and the median value of the students living in the Black Sea region was the lowest (5.0). This difference was statistically significant ( $p < 0.001$ ). The students who worked during the pandemic also had significantly higher anxiety score median values (10.0,  $p < 0.001$ )

A study was done by Dangal<sup>[20]</sup> also contradicts this study as there is no significant association between the sociodemographic variables as education, region, place of residency, family income, living with, and level of anxiety. Except, the gender of the respondents had a significant effect on anxiety, such that females had increased anxiety as compared to the male respondents ( $p < 0.005$ ).

Since there was no literature found between the differences between the anxiety about the socio-demographic variables which is the main gap I had found from the literature review. Thus this study "Anxiety Related to Clinical Exposure During COVID-19 Pandemics among Nursing Students" is a feeling gap and acts as references for future researchers.

### Limitations

The study was limited to the nursing college of Kathmandu valley; therefore, findings do not truly represent all nursing students of the entire country which limits the generalizability of the study findings.

### CONCLUSION

The findings of this study concluded that one-third of respondents 41.67% had a mild level of anxiety, 18.98% had a moderate level of anxiety, 8.80% had a severe level of anxiety whereas 30.56% are normal among the respondents. However, there was a significant relationship between anxiety level and COVID stressors among nursing students as  $p = 0.008$  and  $r = 0.179$ . Besides, there were significant differences in respondent's median anxiety score regarding anxiety with education, training, and COVID Stressors of nursing students at  $p$ -value 0.04, 0.05, and 0.01 respectively. Although this study result shows mild anxiety among the respondents it is suggested to do frequent assessment of mental status should be done to undergraduate students, provisions of PPE and periodic training regarding safety precautions, coping mechanisms of COVID-19 to protect them from the psychological burden of COVID-19 pandemic.

### ACKNOWLEDGMENT

The researcher would like to thank the Nepal Health Research Council (NHRC) for ethical approval, the Institutional Principal of Norvic institute of nursing education and B & B Medical Institute for permitting to conduct this study. We are thankful to all the undergraduate nursing students for their full cooperation for their valuable information.

### FUNDING

No funding source

### CONFLICT OF INTEREST

None declared

### REFERENCES

- Singhal T. A review of coronavirus disease-2019 (COVID-19). *The Indian journal of pediatrics*, 2020; 87(4): 281-6
- World health organization. Overview of Coronavirus. Retrieved from: [https://www.who.int/health-topics/coronavirus#tab=tab\\_1](https://www.who.int/health-topics/coronavirus#tab=tab_1)
- Sohrabi C, Alsafi Z, O'Neill N, Khan M, Kerwan A, Al-Jabir A, Iosifidis C, Agha R. World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). *International journal of surgery*, 2020; 1, 76: 71-6.
- Guo YR, Cao QD, Hong ZS, Tan YY, Chen SD, Jin HJ, Tan KS, Wang DY, Yan Y. The origin, transmission, and clinical therapies on coronavirus disease 2019 (COVID-19) outbreak—an update on the status. *Military Medical Research*, 2020; 7(1): 1-0.
- [https://www.worldometers.info/coronavirus/?utm\\_campaign=homeAdvegas1](https://www.worldometers.info/coronavirus/?utm_campaign=homeAdvegas1)
- Shi Y, Wang J, Yang Y, Wang Z, Wang G, Hashimoto K, Zhang K, Liu H. Knowledge and attitudes of medical staff in Chinese psychiatric hospitals regarding COVID-19. *Brain, Behavior, & Immunity-Health*, 2020; 1, 4: 100064.
- World Health Organization. Coronavirus disease (COVID-19) situation reports. Situation report-123. Geneva, Switzerland, 2020.
- Bastola A, Sah R, Rodriguez-Morales AJ, Lal BK, Jha R, Ojha HC, Shrestha B, Chu DK, Poon LL, Costello A, Morita K. The first 2019 novel coronavirus case in Nepal. *The Lancet Infectious Diseases*, 2020; 1, 20(3): 279-80.
- Pradhan TR. Nepal goes under lockdown for a week starting at 6 am Tuesday. *The Kathmandu Post*, 2020; 23. Available from: <https://kathmandupost.com/national/2020/03/23/nepal-goes-under-lockdown-for-a-week-starting-6am-tuesday>
- Ministry of Health and Population (MOHP). Nepal's Latest Statistics. Kathmandu: Ministry of Health and Population, 2020. Available from: <https://covid19.mohp.gov.np/#/>
- World Health Organization. Mental health and COVID-19. World Health Organization, 2020. Available from: [www.who.int/teams/mental-health-and-substance-use/covid-19](http://www.who.int/teams/mental-health-and-substance-use/covid-19)
- Cao W, Fang Z, Hou G, Han M, Xu Z, Dong J, et al. The Psychological Impact of the COVID-19 Epidemic on College Students in China. *Psychiatry Research*, 2020; 287: 1-7. Available from: <https://doi.org/10.1016/j.psychres.2020.112934>
- Perz CA, Lang BA, Harrington R. Validation of the Fear of COVID-19 Scale in a US college sample. *International Journal of Mental Health and Addiction*, 2020; 1-11. DOI: <https://doi.org/10.1007/s11469-020-00356-3>
- Lee VJ, Ho M, Kai CW, Aguilera X, Heymann D, Wilder-Smith A. Epidemic preparedness in urban settings: new challenges and opportunities. *The Lancet Infectious Diseases*, 2020; 1, 20(5): 527-9.
- Beiter R. The prevalence and correlates of depression, anxiety, and stress in a sample of college students. *J. Affect. Disord*, 2015; 173: 90-96. doi: 10.1016/j.jad.2014.10.054. [PubMed] [CrossRef] [Google Scholar]
- Chernomas W.M., Shapiro C. Stress, depression, and anxiety among undergraduate nursing students. *Int. J. Nurs. Educ. Scholarsh*, 2013; 10(1) doi: 10.1515/ijnes-2012-0032. [PubMed] [CrossRef] [Google Scholar]
- Chen C.J. The prevalence and related factors of depressive symptoms among junior college nursing students: a cross-sectional study. *J. Psychiatr. Ment. Health Nurs*, 2015; 22(8): 590-598. doi: 10.1111/jpm.12252. [PubMed] [CrossRef] [Google Scholar]

17. Sancar B., Yalcin A.S., Acikgoz I. An examination of anxiety levels of nursing students caring for patients in the terminal period. *Pakistan J. Med. Sci*, 2018; 34(1): 94–99. doi: 10.12669/pjms.341.14285. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
18. Labrague L.J. Stress, stressors, and stress responses of student nurses in a government nursing school. *Health Sci. J*, 2013; 7(4): 424–435. [Google Scholar]
19. Pradhan TR. Nepal goes under lockdown for a week starting at 6 am Tuesday. *The Kathmandu Post* May, 2020; 30, 18. <https://kathmandupost.com/national/2020/03/23/nepal-goes-under-lockdown-for-a-week-starting-6am-tuesday>
20. Dangal MR, Bajracharya LS. Students Anxiety Experiences during COVID-19 in Nepal. *Kathmandu University Medical Journal*, 2020; 19, 18(2): 53-7.
21. Toussaint A., Hüsing P., Gumz A., Wingenfeld K., Härter M., Schramm E., Löwe B. Sensitivity to change and minimal clinically important difference of the 7-item generalized anxiety disorder questionnaire (GAD-7) *J Affect Disord*, 2020; 265: 395–401.
22. Savitsky B, Findling Y, Ereli A, Hendel T. Anxiety and coping strategies among nursing students during the covid-19 pandemic. *Nurse Education in Practice*, 2020; 1, 46: 102809.
23. Temiz Z. Nursing Students' Anxiety Levels and Coping Strategies during the COVID-19 Pandemic. *Int Arch Nurs Health Care*, 2020; 6: 150.
24. García-González J, Ruqiong W, Alarcon-Rodriguez R, Requena-Mullor M, Ding C, Ventura-Miranda MI. Analysis of Anxiety Levels of Nursing Students Because of e-Learning during the COVID-19 Pandemic. *Healthcare, Multidisciplinary Digital Publishing Institute*, 2021; 9(3): 252.