



## ASSESSMENT OF STRESS, ANXIETY, AND PHYSICAL HEALTH STATUS DURING COVID-19 PANDEMIC AND COPING STRATEGIES ADOPTED BY NURSING STUDENTS

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**ABSTRACT** **Aim:** Assessment of Stress, Anxiety, and Physical Health Status during Covid-19 Pandemic and Coping Strategies adopted by Nursing Students. **Methods:** A Quantitative research approach with descriptive design was used. A total of 416 nursing students were recruited by total enumeration sampling technique. Tools used were demographic profile, clinical profile, perceived stress scale, generalized anxiety disorder 7-item scale, health assessment before and during covid-19 pandemic and lockdown period and BRIEF cope. **Results:** The results reflected that students were experiencing moderate stress level (284), minimal level of anxiety (221), also disturbances in physical health like sleep disturbances, poor eating habits, change in behavior and eye problems. The coping strategies used by students were also of avoidant nature. Also, there was a positive correlation between stress and anxiety. **Conclusion:** According to the findings it was concluded that the nursing students were experiencing stress, anxiety, poor physical health status and were using avoidant coping strategies.

**KEYWORDS :** Stress and Anxiety, Physical Health Status, Covid-19 Pandemic, Coping Strategies, Nursing Students

### INTRODUCTION

Coronavirus disease 2019 (COVID-19) was first identified in Wuhan City in December 2019, after which, the disease spread throughout Hubei Province and other parts of China. After causing significant morbidity and mortality in China, by February 2020, COVID-19 had spread to numerous other countries, including the USA, Italy, Spain, Germany, France, Iran and India. Healthcare workers (HCWs) are amongst the high-risk group to acquire this infection.<sup>5</sup>

The continued impact of restrictions and the uncertainty around going back to normal were likely to affect personal and social life as well as mental wellbeing of the people. Ongoing restrictions were likely to impact physical health as well, specifically those with chronic diseases.<sup>6</sup>

Health professionals and nurses in particular are playing an important role in the control of the pandemic and the management of COVID-19 patients. Nursing students have seen the high workload that this profession requires, and that nurses are especially subjected to high levels of stress and anxiety. Since they will be the nurses of the future, adequate training and mental health are central.<sup>1</sup>

### MATERIALS AND METHODS

A Quantitative research approach with descriptive design was used. A total of 416 nursing students were recruited by total enumeration sampling technique. Tools used for the study were demographic profile, clinical profile, perceived stress scale, generalized anxiety disorder 7-item scale, health assessment before and during covid-19 pandemic and lockdown period and BRIEF cope. The assessment of stress, anxiety, health status and coping strategies used by students was done after obtaining their demographic and clinical variables.

### Results

#### Demographic profile

In the view of demographic profile, maximum of students were from 17-20 years of age female, residing at home during pandemic, having low socio-economic status.

#### Level of Stress and anxiety

**Table 1: Level of stress and anxiety of students during Covid-19 Pandemic** N=416

Level of stress	Scores	Frequency	Percentage
Mild stress	0-13	116	27.9
Moderate stress	14-26	284	68.3
Severe stress	27-40	16	3.8
Minimal anxiety	0-4	221	53.1
Mild anxiety	5-9	100	24
Moderate anxiety	10-14	90	21.6

Severe anxiety	15-21	05	1.2
Maximum score-21			Minimum score-0

#### Coping strategies

Data reflecting in terms of coping strategies that most of the nursing students were using avoidant type of coping strategies like self-distraction, substance use, denial, venting, self-blame and behavioral disengagement during Covid-19 Pandemic.

#### Physical Health Status

**Table 2: Level of physical health of students before and during Covid-19 Pandemic** N=416

S. No.	Health parameter	f	%
1.	<b>How many hours of sleep do you get per day (24 hours) during lockdown?</b>		
1.1	<6 hours	44	10.6
1.2	6-8 hours	261	62.7
1.3	8-10 hours	101	24.3
1.4	> 10 hours	10	2.4
1.1	<b>How many hours of sleep do you get per day (24 hours) before lockdown?</b>		
1.1.1	<6 hours	33	7.9
1.1.2	6-8 hours	251	60.3
1.1.3	8-10 hours	117	28.1
1.1.4	> 10 hours	15	3.6
2.	<b>How much physical exercise do you have per week during lockdown?</b>		
2.1	Daily	145	34.9
2.2	Once a week	96	23.1
2.3	3 times a week	66	15.9
2.4	More than 3 times a week	34	8.2
	No exercise	75	18
2.1	<b>How much physical exercise do you have per week before lockdown?</b>		
2.1.1	Daily	159	38.2
2.1.2	Once a week	86	20.7
2.1.3	3 times a week	71	17.1
2.1.4	More than 3 times a week	35	8.4
2.1.5	No exercise	65	15.6
3.	<b>What was your eating habit during lockdown period?</b>		
3.1	3 meals with 2 snacks	265	63.7
3.2	2 meals with 3 snacks	89	21.4
3.3	More than 3 meals	54	13
3.4	More than 2 snacks	8	1.9
3.1	<b>What was your eating habit before lockdown period?</b>		
3.1.1	3 meals with 2 snacks	257	61.8

3.1.2	2 meals with 3 snacks	84	20.2
3.1.3	More than 3 meals	69	16.6
3.1.4	More than 2 snacks	6	1.4
4.	<b>Have you spend any extra time on computer/mobile EXCEPT online classes?</b>		
4.1	Yes	226	<b>54.3</b>
4.2	No	190	45.7
5.	<b>Do you have any change in body weight?</b>		
5.1	Gain in body weight	135	33.2
5.2	Lose in body weight	76	18.3
5.3	No change	202	<b>48.6</b>
6.	<b>Do you feel any aggressiveness in your behavior during lockdown period?</b>		
6.1	Yes	168	40.4
6.2	No	248	<b>59.6</b>
7.	<b>How much bodily pain you developed during lockdown period?</b>		
7.1	Mild	130	31.3
7.2	Moderate	70	16.8
7.3	Severe	13	3.1
7.4	None	203	<b>48.8</b>
7.1.	<b>Site of pain.</b>		
7.1.1	Head	213	<b>51.2</b>
7.1.2	Neck region	99	23.7
7.1.3	Lower back	53	12.7
7.1.4	Legs	51	12.2
8	<b>Do you have any Eye problem due to online classes?</b>		
8.1	Yes	289	<b>69.5</b>
8.2	No	127	30.5
	<b>If yes, specify the problem of eye</b>		
8.1.1	Redness	125	30
8.1.2	Pain	13	3.1
8.1.3	Irritation	127	<b>30.5</b>
8.1.4	Watery discharge	54	12.9
8.1.5	Dry eye	41	9.8
8.1.6	Blurred vision	10	2.4
8.1.7	Refraction error	47	11.2
9.	<b>Do you have any Eye problem due to online classes?</b>		
9.1	Yes	118	28.4
9.2	No	298	<b>71.6</b>
	<b>If yes, specify the problem of eye</b>		
9.1.1	Pain	298	<b>71.6</b>
9.1.2	Irritation	74	17.7
9.1.3	Any discharge	40	9.6
9.1.4	Hearing disturbance	04	0.9
10.	<b>How was your home environment regarding learning/ study during lockdown period?</b>		
10.1	Conducive	313	<b>75.2</b>
10.2	Disturbing	103	24.8
11	<b>Did your family support you for online classes during lockdown period?</b>		
11.1	Yes	362	<b>87</b>
11.2	No	54	13
12	<b>In general, compare to one year ago, what would you say about your health?</b>		
12.1	Excellent	64	15.4
12.2	Very good	86	20.7
12.3	Good	189	<b>45.4</b>
12.4	Fair	63	15.1
12.5	Poor	14	3.4
13	<b>Do you take any medicine for physical illness identified during lockdown period other than any previous regular medicine?</b>		
13.1	Yes	40	9.6
13.2	No	376	<b>90.4</b>

### Correlation

In terms of correlation, there was a strong positive correlation between stress and anxiety of nursing students before and during Covid-19 Pandemic (**0.678 (0.00)\***).

### Association

#### 1. Stress of students of during Covid-19 Pandemic with demographic variables

Association between the stress of students of during Covid-19 Pandemic and demographic variables shows that there is significant

association of stress with academic year ( $\chi^2=36.5$ ,  $p=0.00$ ) and state where they belong ( $\chi^2=52.2$ ,  $p=0.00$ ) at o.o5 level of significance.

#### 2. Stress of students of during Covid-19 Pandemic with Clinical profile

In context of clinical profile there was association with the items: Are you taking treatment for any chronic condition, any close relative affected with COVID 19, Any history of anxiety attack within last 6 months, Any history of depressive attack within last 6 months, Any family history of anxiety or depression.

#### 3. Anxiety of students of during Covid-19 Pandemic with demographic variables

Association between the anxiety of students of during Covid-19 Pandemic and demographic variables shows that there is significant association of stress with academic year ( $\chi^2=51.1$ ,  $p=0.00$ ) and state where they belong ( $\chi^2=52.2$ ,  $p=0.00$ ) at o.o5 level of significance.

#### 4. Anxiety of students of during Covid-19 Pandemic with Clinical profile

In context of clinical profile there was association with the items: Are you taking treatment for any chronic condition, Any close relative affected with COVID 19, Any history of anxiety attack within last 6 months, Any history of depressive attack within last 6 months, Are you taking any medication for stress or anxiety, Any family history of anxiety or depression.

### Discussion

Assessing the stress levels of Nursing students before and during lockdown due to the COVID-19 pandemic. Stress increased substantially during lockdown. Financial, family or emotional problems, as well as physical exercise, also increased. During lockdown, stress in Nursing students increased. This could be triggered by students' personal problems, and physical exercise may be used as a way to reduce stress. Academic performance was better in those students reporting less stress.<sup>4</sup>

Evaluation of nursing students' views on the COVID-19 pandemic and their perceived stress levels. The average score on the PSS was  $31.69 \pm 6.91$ , indicating that the students had a moderate level of stress. Significant differences in PSS score were found in terms of age and sex ( $P < .001$  and  $P < .001$ , respectively).<sup>5</sup>

Another study was carried out to identify factors associated with psychological distress, fear and coping strategies during the COVID-19 pandemic. high levels of fear (2.93, 1.83-4.67) were associated with higher levels of psychological distress. Perceived distress and having medium to high levels of psychological distress (2.90, 1.82-5.62) were associated with a higher level of fear; while healthcare service use in the last four weeks was associated with medium to high resilience.<sup>2</sup>

Another study was investigated the academic stress and stress coping strategies on impact of COVID 19 lockdown experienced by the students. It was found that there is a highly significant negative correlation between Academic Stress and Coping Strategies<sup>6</sup>. This study concludes that, if the academic stress score increases then the coping strategy score will be decreasing and vice versa.<sup>3</sup>

### Conclusion

In addition to conclusion of this study it was found that the nursing students were experienced stress, anxiety and it will also impact their physical health. It was also flamed that the students were using avoidant coping strategies instead of acceptance.

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