Perceived Level of Stress regarding Virtual Classroom among Nursing Students during COVID-19

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Abstract: *COVID-19 is a newly discovered infectious corona virus that spreads from one person to another through droplets. The virus emerged in December 2019 and was first discovered in Wuhan, China. It was declared as a public health emergency of international concern in January 2020. Due to crisis of COVID 19 students have to disconnect from their education system and for preparing nurses its must to relate the theory with skill labs and then hands on practice is required to teach nursing skills. Right now we are emphasizing on online education but expertise of skills will be required online simulation programs and digital labs. So nursing students to learn more about physical and emotional effects of students and teachers to enhance learning process and continuing growth of nursing career. <u>Result</u>: The mean value of the total PSS scores was 10.12 and standard deviation 7.33. In general, 31 nursing students had moderate stress, and 149 had severe stress and 20 nursing students were mild stress. <u>Conclusions</u>: This study showed severe to moderate levels of stress among nursing students during the COVID-19 outbreak. This is most likely due to the mandatory lockdown and online /virtual classrooms learning. Female nursing students showed a severe level of stress. Online stress management programs are recommended to improve stress and coping strategies, as well as prevent further psychological consequences.*

Keywords: covid-19, stress virtual learning, pandemic, perceived stress scale, nursing students

1. Introduction

COVID-19 is a newly discovered infectious corona virus that spreads from one person to another through droplets. The virus emerged in December 2019 and was first discovered in Wuhan, China. It was declared as a public health emergency of international concern in January 2020..Globally, the sluggish rate of reform in learning institutions is appalling, despite thousands of years-old, seminar-based learning methods; structural prejudices rooted and outmoded classes. Traditional simultaneous interactive education resources (including reading materials through Google Classroom) have already been brought to one university with bidirectional face-to-face visual training to support avoid closures in classrooms. After all, it is right to say that Class delays have a detrimental effect on academic performance for the pupils (Akther 2020). The COVID-19 has resulted in schools shut all across the globe. Globally, over 1.1 billion children are out of the classroom. As a result, education has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms. Research suggests that online learning has been shown to increase retention of information, and take less time, meaning the changes corona virus have caused might be here to stay. his health crisis impacts not only front line staff and clinical leaders but all systems and communities. COVID-19 has also already disrupted universities and academic institutions. Within the health field, schools and college of nursing are bracing for unique challenges related to our role in helping develop the next generation of care providers. This article focuses on the unique needs and concerns of nursing educators and nursing students in the face of the COVID-19 pandemic.

Need of the study: Due to crisis of COVID 19 students have to disconnect from their education system and for preparing nurses its must to relate the theory with skill labs then hands on practice is required to teach nursing skills. Right now we are emphasizing on online education but expertise of skills will be required online simulation programs and digital labs. So nursing students to learn more about physical and emotional effects of students and teachers to enhance learning process and continuing growth of nursing career. Even before COVID-19, there was already high growth and adoption in education technology, with global edtech investments reaching US$18.66 billion in 2019 and also the overall market for online education projected to reach $350 Billion by 2025. Whether it's language apps, virtual tutoring, video conferencing tools, or online learning software, there has been a significant course in usage since COVID-19. The literature on recent outbreaks, such as Ebola, the Severe Acute Respiratory Syndrome (SARS), and Middle Eastern Respiratory Syndrome (MERS), showed unique consequences of mental health burden during pandemics. Several factors were identified in the process of understanding how the public would respond during disease outbreaks, including disease course, media and misinformation, quarantine, neuro psychological sequel of the infected individual, and the mental health burden among health care workers. During a quarantine, people face many consequences of physical and emotional social distancing, including isolation and future uncertainty. Degrees of isolation vary between individuals, ranging from physical (i.e., contact) or symbolic (i.e., separation from loved ones), and affect the human psyche. Previous studies showed that disease outbreaks impacted individual mental health and well-being. Multiple risk factors were addressed. It was found that women and those aged between 16 and 24 years exhibited a great risk of developing psychological distress. Similarly, recent studies showed a positive response to

feeling panicked, depressed, or emotionally disturbed during the covid-19. To our knowledge, there are currently no studies that have assessed stress among nursing students during the quarantine related to the COVID-19 pandemic. Therefore, this study aimed to explore the perceived stress level among nursing students due to the corona virus disease outbreak and the resulting suspension of class room teaching.

2. Objectives of the study

1) To assess the perceived level of stress among nursing students in virtual classroom learning.
2) To find out the association between pretest level of stress between selected demographic.

3. Materials and Methods

In this study descriptive survey design and quantitative research approach was adopted. The data for this study were obtained using online survey method , which was distributed from 1st November to 20th December 2020, during the corona virus disease outbreak. The sampling criteria of study included both male and female B.sc nursing students stay in Bhopal and were willing to participants in the study. An online survey was distributed using non-probability convenient sampling to nursing students and Google Forms was used to create a link for the survey, which was posted in their whatup group and email id. Data collection; The online survey consisted of three Section : 1) Socio-demographic characteristics that included age, gender, course/ program, placement. Residence 2) Perceived Stress Scale (PSS) of Sheldon Cohen. The scale consists of ten questions that are used to measure the perception of stress experienced by the nursing students over the past month. It includes a 5-point Likert scale and responses ranging from never (0) to very often. Total mean scores of 0–13 are considered to be mild stress, 14–26 indicate moderate stress, and 27–40 indicate severe stress. The PSS is an easily and widely used tool with acceptable psychometric properties. Statistical analysis; A statistical analysis was performed using the Statistical Package (SPSS) version 23.0 software. Categorical variables were expressed as percentages. The Chi-square test was used to compare between perceived stress scales (mild , moderate, and severe perceived stress).When p-values were less than 0.05, the differences were considered statistically significant.

4. Results

Section 1: Socio demographic characteristics: A total of 200 nursing students were responded to the online survey. The findings of the demographic characteristics of the surveyed population were the nursing students had an average age of 21.292 ± 2.321 years. Maximum nursing students were female (74.7%) and regarding placement maximum nursing students were in BSC Nursing final year and regarding residence maximum nursing students were in living in village areas (79.8%).

Section 2; Perceived level of stress among nursing students: The finding suggested that 41% of the students (fairly or very) very often felt nervous and stressed; 59% were often angered due to things that happened outside of their control; 30.5% often felt that difficulties were piling up so high that they could not overcome them; 43% often found that they could not cope with all the things that they had to do; 22.2% often felt that they were unable to control the important things in their life; 34.9% were often upset because of something that happened unexpectedly. Conversely, 29.3% of the students often felt confident in their ability to handle personal problems, 30.8% often were able to control irritations in their lives, 26.5% often felt that things were going their way, and 25.6% often felt that they were on top of things. **The mean value of the total PSS scores was 10.12 and standard deviation 7.33.** In general, 31 nursing students had moderate stress, and 149 had severe stress and 20 nursing students were mild stress.

Level of stress	Scoring	Mean	SD	P-value
Mild stress (1-13)	20			
Moderate stress (14-26)	31	10.12	7.33	P=0.003
Severe stress (27-40)	149			
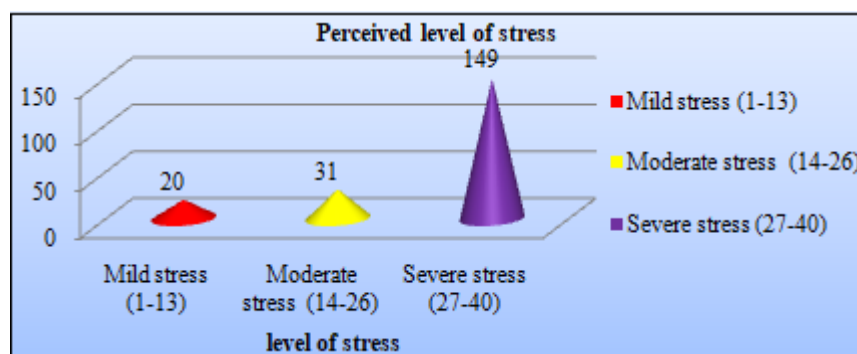
Section 3: Regarding association: There were significant associations between the level of stress with gender, age, and placement/course which was higher than table value p=0.003.

5. Discussion

As per the analysis it showed that nursing students reported feeling depressed, stressed, anxious, fearful, angry, and unmotivated due to online learning virtual class because of poor internet connectivity and also facing less interaction in virtual class and limited time of the lecture, Difficulties

related to studying, problem solving, and time management were also reported. Bsc nursing final students were worried about their grades or percentages of final year will reflect in their future. Virtual online learning was also effects the practical skills due to lack of clinical expose. These psychological responses are more likely to occur and worsen due to the lack of interpersonal communication during the social distancing. In addition, distance learning was also found to be associated with stress, which is due to academic, financial, and social difficulties. Coping with the online mode might become a challenge for students this includes students' ability to deal with technology, sufficient home resources facilitating online learning, or stable internet connection.

6. Limitations

This study had limitation with the convenient sampling using online platform for collecting data which limits the generalization of the result and study is depends on the self reported questionnaire that may be affected by nursing students interpretation

7. Conclusions

This study showed severe to moderate levels of stress among nursing students during the COVID-19 outbreak. This is most likely due to the mandatory lockdown and online /virtual classrooms learning. Female nursing students showed a severe level of stress. Online stress management programs are recommended to improve stress and coping strategies, as well as prevent further psychological consequences.

Conflict of interest: The author has no conflict of interest to declare.

Ethical approval: Ethical approval was obtained from the Institution. Explain the purpose of the study and Informed consent was obtained from the nursing students through online and maintain the confidently

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