ORIGINAL RESEARCH PAPER

Physiology

ASSESSING THE ANXIETY LEVELS AMONG MBBS STUDENTS DURING COVID-19 LOCKDOWN

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ABSTRACT

Introduction: The outbreak of COVID-19, which started in China in December 2019, has spread around the entire world. Due to the COVID-19 pandemic, lockdowns have been implemented in numerous countries around the world. On 23 March 2020, India went into Nation-wide lockdown. Schools, Colleges & Universities were closed nationwide. The disruption in academics, daily routines and isolation had a deeply negative impact on students, making them extremely vulnerable to mental health issues like mood and anxiety disorders and depression. **Aim:** The main aim of this study is to assess the level of anxiety among MBBS students during the COVID-19 lockdown. **Methodology:** A cross-sectional online survey was conducted on 632 MBBS Students. A survey invitation through Google Forms was sent to students via WhatsApp & was assured regarding the confidentiality of their responses. Anxiety levels were assessed using Zung's self-rating anxiety scale (SAS). Results: Out of 632 Students, 24.07% of students experienced mild to moderate levels of Anxiety, 6.48% of students experienced Marked to Severe Levels of Anxiety and 0.92% of Students experienced Extreme levels of Anxiety. Gender wise nearly 46.54% of female students and 16% of male students experienced different levels of anxiety. Academic Year wise 57.13% 1st MBBS, 7.69% 2nd MBBS, 11.53% Final MBBS Part 1 & 53.56% Final MBBS Part 2 students experienced different levels of anxiety. **Conclusion:** Gender, Academic Year were significantly associated with anxiety levels. Predominant stressors were online learning & uncertainty related to their academic performance.

INTRODUCTION

Coronavirus disease 2019 (COVID-19) is an ongoing pandemic, that started in Wuhan City, China in December 2019[1].The first case of COVID-19 infection in India was reported from Kerala on January 30, 2020, and the affected had a travel history from Wuhan City, China.[2]On 23 March 2020, in India a nationwide lockdown was ordered by the Prime Minister of India as a preventive measure against the COVID-19 pandemic, after a 14-hour voluntary public curfew on 22 March 2020[3]. India underwent two COVID-19 pandemic lockdowns. India's First phase of lockdown extended from 23-03-2020[4] to 07-06-2020. The second phase of lockdown extended from March of 2021 to June of 2021[4]. According to UNESCO, the pandemic had interrupted the learning of more than one billion students in 129 countries around the world[5]. The lockdown had compelled many educational institutions to cancel their classes, and examinations and to choose online modes, further inducing anxiety among the students. Even during the SARS outbreak, many studies stated that quarantine was linked to high rates of depression and anxiety[7] .Similarly, throughout the 2009 H1N1 pandemic high anxiety was detected [7] .Research has been conducted in some countries on the effects of the COVID-19 pandemic and lockdowns among students which reported significant adverse effects on the student's psychological well-being[8,9]. In Guntur Medical College, Guntur, Andhra Pradesh, which is our study population, Online classes for all the Academic Years were conducted from May 2020 till the end of July 2021.As the student's psychological well-being will be affected because of the fear of losing the academic year due to lockdown, we aimed to assess the levels of anxiety among MBBS students of Guntur Medical College, Guntur, Andhra Pradesh and to identify the potential stressors among the students during lockdown period.

MATERIALS AND METHODS
Study Population
- To assess the level of anxiety among MBBS students of all the Academic Years throughout the COVID-19 Lockdown period in Guntur Medical College, Guntur, Andhra Pradesh, a cross-sectional online survey was conducted on 800 MBBS students out of which 632 MBBS Students were selected for the study.
- The study period was between 18 March and 27 May 2021
- With periodic reminders, the survey invitation was sent to students through Google forms via WhatsApp messages.
- Participation in the survey was voluntary and the student's consent was obtained before the start of the survey and was assured regarding the confidentiality of their responses.
- The research instruments in this study include basic demographics like gender & year of study.

Inclusion Criteria
- MBBS students from 1st Year to Final MBBS part 2
- Given consent to participate
- Students with no history of any psychiatric illnesses

Exclusion Criteria
- Non MBBS students
- Not given consent to participate
- Students with a history of psychiatric illness

Table 1. Details OfThe Study Population

Academic Year	Females	Males	Total Number of Students
1st Year	80	79	159
2nd Year	82	76	158
Final MBBS Part 1	80	78	158
Final MBBS Part 2	79	78	157

Study Instrument
- In this survey, anxiety levels were assessed using Zung's self-rating anxiety scale (SAS) [10] by self-rating anxiety questionnaire.
- The Self Rating Anxiety Scale measures anxiety levels in 4 groups of manifestations based on scoring: cognitive, motor, autonomic and central nervous system symptoms.

- Each question is scored on a scale of 1-4 which is a Likert-type
- Overall assessment was done by calculating the individual score.

The total scores range from 20-80 and this score determines the levels of anxiety
- 20-44 Normal range
- 45-59 Mild to Moderate Anxiety levels
- 60-74 Marked to Severe Anxiety levels
- 75 and above Extreme Anxiety levels

RESULTS
Table 2. Results From Univariate Analysis

Variable	Normal	Mild to Moderate	Marked to Severe	Extreme	CHI-Square
Gender					
Female	171 (53.46%)	122 (37.93%)	22 (6.89%)	6 (1.72%)	71.65
Male	261 (84%)	38 (12%)	12 (4%)	0 (0%)	
Academic Year					
1st Year	68	62	23	6	173.4
2nd Year	146	12	0	0	
Final MBBS Part 1	140	18	0	0	
Final MBBS Part 2	72	68	17	0	

The association between Anxiety levels and the student's respective academic years is found to be significant and the P value is <0.0000001

The association between anxiety levels and gender is found to be significant. P value is <0.0000001

Table 3. Results From Ordinal Multivariate Analysis

Parameter	Mean	Standard Deviation	95% CI
Gender			
Female	43	12.55	41.5 to 44.3
Male	35.8	9.04	34.8 to 36.8
Academic Year			
1st Year	46.59	14.12	44.4 to 48.8
2nd Year	33.52	5.29	32.7 to 34.3
Final MBBS Part 1	34.28	6.35	33.5 to 35.3
Final MBBS Part 2	44.46	12.28	42.5 to 46.4

DISCUSSION
In our study, we examined anxiety levels among MBBS students of Guntur Medical College during the COVID-19 pandemic lockdown. 26% experienced mild to moderate, 6% experienced marked to severe and 1% of the students experienced extreme anxiety levels during the COVID-19 pandemic lockdown period. According to gender, in females 37.93% experienced mild to moderate, 6.89% experienced marked to severe and 1.72% experienced extreme anxiety levels, whereas, in males, 12% experienced mild to moderate, 4% experienced marked to severe and 0% experienced extreme anxiety levels. According to Academic Year wise, in 1st year – 39.28% experienced mild to moderate, 28% experienced Marked to severe and 3.57% experienced extreme levels of anxiety. In 2nd Year- 7.69% experienced mild to moderate, 0% experienced Marked to severe and extreme levels of Anxiety. In Final MBBS Part 1- 11.53% experienced mild to moderate and 0% experienced Marked to severe and extreme levels of anxiety. Among Final MBBS Part 2-42.85% experienced mild to moderate, 10.71% experienced Marked to severe and 0% experienced extreme levels of anxiety. The levels of anxiety were higher among the female students than the male students. The results are similar to[10]. Studies state that females are more anxious because they believe that worry is useful and helps them to prevent future bad events, whereas men use distraction as a coping strategy more than women[11]. The levels of anxiety were higher among Students in their First Year and Final MBBS part2 who were going to appear for their final university examinations. Stressors were predominantly remote online learning, uncertainty related to their performance in their upcoming University Examinations, fear of losing the academic year, fear of infection with the virus and the financial condition of the family.

The study was limited to only MBBS Students and there is uncertainty about whether the responses were genuine or not as the study was conducted online with questionnaires.

CONCLUSION
The result from this study concludes that the students require psychological support from their parents as well as from their faculty during times of Pandemic and Lockdowns. Building and maintaining relationships is important for the mental and social well-being of student life. Counselling the students, encouraging them to practice meditation and share their worries & fears with the people whom they trust may reduce anxiety to certain levels. Psychological Interventions should be delivered during pandemic conditions to reduce mental health issues and boost the well-being of the students in the long term. Social media platforms can be the source of spreading misinformation which creates panic further alleviating anxiety and this panic can be fought only by spreading the verified real-time information[12] and strict action should be taken against these social media platforms and individuals who are misguiding with false information.

REFERENCES
1. Akande, Oluwatosin Wuraola, and Tanimola Makanjuola Akande. "COVID-19 pandemic: A global health burden." *The Nigerian postgraduate medical journal* vol.27,3 (2020): 147-155. doi:10.4103/npmj.npmj_157_20
2. Andrews, M A et al. "First confirmed case of COVID-19 infection in India: A case report." *The Indian journal of medical research* vol. 151,5 (2020): 490-492. doi:10.4103/ijmr.IJMR_2131_20
3. The Lancet. "India under COVID-19 lockdown." *Lancet (London, England)* vol. 395,10233 (2020): 1315. doi:10.1016/S0140-6736(20)30938-7
4. https://en.wikipedia.org/wiki/COVID-19_lockdowns#cite_note-320
5. United Nations Educational, Scientific and Cultural Organization (UNESCO). Available online: https://en.unesco.org/covid19/educationresponse
6. Hawryluck, Laura et al. "SARS control and psychological effects of quarantine, Toronto, Canada." *Emerging infectious diseases* vol. 10,7 (2004): 1206-12. doi:10.3201/eid1007.030703
7. Wheaton, M.G., Abramowitz, J.S., Berman, N.C. *et al.* Psychological Predictors of Anxiety in Response to the H1N1 (Swine Flu) Pandemic. *Cogn Ther Res* 36, 210–218 (2012). https://doi.org/10.1007/s10608-011-9353-3
8. Sundarasen S, Chinna K, Kamaludin K, Nurunnabi M, Baloch GM, Khoshaim HB, Hossain SFA, Sukayt A. Psychological Impact of COVID-19 and Lockdown among University Students in Malaysia: Implications and Policy Recommendations. *International Journal of Environmental Research and Public Health.* 2020; 17(17):6206. https://doi.org/10.3390/ijerph1717626
9. Jun Zhang, Weili Wu, Xin Zhao, Wei Zhang, Recommended psychological crisis intervention response to the 2019 novel coronavirus pneumonia outbreak in China: a model of West China Hospital, *Precision Clinical Medicine*, Volume 3, Issue 1, March 2020, Pages 3–8, https://doi.org/10.1093/pcmedi/pbaa006
10. Dunstan, Debra A, and Ned Scott. "Norms for Zung's Self-rating Anxiety Scale." *BMC psychiatry* vol. 20,1 90. 28 Feb. 2020, doi:10.1186/s12888-019-2427-6
11. Bahrami, Fatemeh, and Naser Yousefi. "Females are more anxious than males: a metacognitive perspective." *Iranian journal of psychiatry and behavioral sciences* vol. 5,2 (2011): 83-90.
12. Anneliese Depoux, PhD, Sam Martin, PhD, Emilie Karafillakis, MSc, Raman Preet, MPH, Annelies Wilder-Smith, MD, Heidi Larson, PhD, The pandemic of social media panic travels faster than the COVID-19 outbreak, *Journal of Travel Medicine*, Volume 27, Issue 3, April 2020, taaa031.