



Original Research Article

Study of stress in medical student during COVID pandemic

Chaitra M S^{1,*}, Shruthi K², Pushpa G³, Chaitra N D⁴¹Dept. of Physiology, Bowring and Lady Curzon Medical College and Research Institute, Bengaluru, Karnataka, India²Dept. of Physiology, St. Peters Medical College, Hospital and Research Institute, Tamil Nadu, India³Dept. of Physiology, Akash Institute of Medical Sciences and Research Centre, Bengaluru, Karnataka, India⁴Dept. of Physiology, Chandramma Dayananda Sagar Institute of Medical Education and Research, Bengaluru, Karnataka, India

ARTICLE INFO

Article history:

Received 14-01-2021

Accepted 25-01-2021

Available online 12-04-2021

Keywords:

Stress

Questionnaire

Councilors

ABSTRACT

Background and Objective: Several studies have shown that medical students experience high levels of stress during their undergraduate course, due to the medical curriculum. Due to COVID shut down, now students are away from regular college routine, but are they still stressed?

This study was conducted to better understand student's experiences of stress, for instance, what causes students stress and what students do to manage their feelings of stress.

Materials and Methods: First year medical students from various medical colleges in Karnataka were selected for the study. Questionnaire related to symptoms of stress and coping methods, Grading the reason of stress and needed guidance were included. Questions were circulated online. 115 responses were recorded and analyzed.

Results: This study showed in the past three months during the shutdown, 63 percent of students were feeling low, 60 percent students said they are feeling anxious. 60 percent felt irritable. 30-50 percent students are completely stressed of missing on regular classes, practical and clinical exposure, uncertainty of exams and uncertain future. More than 5 percent students are sorting medical help for the same. More than 90 percent of students who are stressed are trying many relaxation methods. None of the students have opted for any college faculty or councilors for help during this crisis.

Discussion and Conclusion: More than 50 percent medical students are stressed and are having symptoms. None of them have opted for guidance or counselling from the colleges. From this study, I conclude that all colleges must provide college councilors or staff to help students deal with their stress during such crisis. On a regular basis, student must be made aware of counsellors or mentors in college or attached hospital, whom they can consult when needed.

© This is an open access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

1. Introduction

All educational institutes including medical colleges around the world have temporarily closed in an attempt to contain the spread of the COVID-19 pandemic. These closures are impacting many of the medical students.¹

Several studies have shown that medical students experience high levels of stress during their undergraduate course, due to the medical curriculum.²⁻⁴ High level of

stress is seen especially in initial years of medicine.⁵

Due to COVID shut down, many medical universities have opted for online classes⁶ and now students are away from regular college routine, but are they still stressed?

Many studies have been conducted to check stress in students and few studies have also been conducted on medical students. Many studies conducted on stress on various set of population show, COVID pandemic has created a stressful situation around the globe. Uncertainty of the situation could be main cause of stress in many.⁷

* Corresponding author.

E-mail address: chaitra.msridhar@gmail.com (Chaitra M S).

Study in China has concluded as COVID-19 pandemic to soar emotions in general population and also affected medical students with a state of uncertainty about the future, causing profound psychological effects in them.⁸

Boston University researcher and collaborators surveyed 18,000 college students, revealing pandemic-related concerns. The survey showed COVID-19 pandemic is putting significant stress on college students, many of whom are worried about increasing financial pressures caused by the pandemic and the lack of easily accessible mental health care. The survey, conducted between March and May 2020 in collaboration with the American College Health Association, focused on students' attitudes, concerns, preventive behaviors, and their perceived supportiveness of colleges and universities related to COVID-19, survey also found the rate of depression among college students has increased since the start of the pandemic.⁹

Few studies have shown that medical students are also stressed, but none of the studies have tried analysing reason behind the stress and the coping mechanism of stress.

In our study we intend to better understand medical students experience of stress and also to know how students if stressed are managing the feelings of stress.

2. Objectives of the Study

1. To understand Medical student's experiences of stress.
2. To know what students, do to manage their feelings of stress.

3. Materials and Methods

First year medical students from various medical colleges in Karnataka were selected for the study. Questionnaire related to symptoms of stress and coping methods, Grading the reason of stress and needed guidance were included. Questions were circulated online through Google forms. Students responses were collected after considering inclusion and exclusion criteria. Total of 115 responses were recorded and statistically analyzed.

3.1. Inclusion criteria

1. First year MBBS students.
2. Away from regular college routine.
3. Willingness to participate in the study.

3.2. Exclusion criteria

1. History of any mental illness.

3.3. Methodology

This study was reviewed and approved by Institutional ethical committee. First year MBBS Students were involved in the study. Information sheet on the intentions, methods and procedure of the study were circulated to all

the participants. Written informed consent was obtained through mail, from all students before their enrolment in the study. Participants were assured their information and responses would be kept confidential and would not be disclosed under any circumstances.

A descriptive study was conducted during July 2020 to study stress in medical students during past 3 months of Covid lockdown and to understand the coping mechanism followed by them. Questionnaire used in our study was chosen from mini project by Healthwatch for students, at their university of the West of England and Bristol, titled 'To study the stress and coping mechanism of the students'.¹⁰ Questions were just not restricted to any medical definition of disease, it had questions which emphasizes on subjects feeling of stress and it also had open end questions of coping strategy for affected subjects. The questionnaire will help us understand how students manage stress, and what can be done to help students manage feelings of stress and pressure.

Questionnaire used 'To study the stress and coping mechanism of the students'.¹⁰

1. Which of the below mentioned stress feelings have you experienced in past 3 months ?
 - a). Feeling low
 - b). Increased heart rate
 - c). Change in appetite
 - d). Sleeping too much
 - e). Not sleeping enough
 - f). Bad dreams
 - g). Anxiety of not being able to cope
 - h). Feeling irritable
 - i). Others mention?
2. On a scale of 1 to 5, 1 being not at all and 5 being completely, how much do your feeling of being under pressure or being stressed, impact your daily life? What, if anything, do you do to manage your feeling of being stressed or under pressure?
 - a). Exercise
 - b). Spend time with family and/or friends
 - c). Religion or spirituality
 - d). Spend time in nature
 - e). Counselling
 - f). Listen to music
 - g). Others mention?
3. On a scale of 1 to 5, 1 being not at all and 5 being completely, how much does thinking about the future causes stress or pressure??
4. On a scale of 1 to 5, 1 being not at all and 5 being completely, how much does the college work and deadlines causes stress or pressure??
5. On a scale of 1 to 5, 1 being not at all and 5 being completely, how much does missing college and friends causes stress or pressure??
6. On a scale of 1 to 5, 1 being not at all and 5 being completely, how much does missing classes causes

stress or pressure??

7. On a scale of 1 to 5, 1 being not at all and 5 being completely, how likely does lack of practical and clinical exposure during this pandemic causes stress or pressure??
8. On a scale of 1 to 5, 1 being not at all and 5 being completely, how much does the uncertainty of upcoming exams causes stress or pressure??
9. On a scale of 1 to 5, 1 being not at all and 5 being completely, how much does your appearance/body image causes stress or pressure??
10. If you need support to cope up with stress, who would you go to??
11. Which services, if any, have you used to manage your feeling of being stressed or under pressure?
 - a). Doctors/medication
 - b). Exercise groups
 - c). College counselling
 - d). Other counselling
 - e). Relaxation groups
 - f). Faith groups
 - g). Social club/society
 - h). Others mentioned
12. If applicable, please tell us the name of the service you used and what you thought about the care they offered you. What was good? What could be improved?
13. What do you think will be helpful to manage your stress during this pandemic?

Feedback of students were collected at the end, to know what at the moment can help them coping stress feeling. Results were statistically analysed.

4. Results

Descriptive statistical analysis has been carried out in the present study. Results on continuous measurements are presented on Mean \pm SD (Min-Max) and results on categorical measurements are presented in Number (%). Significance is assessed at 5 % level of significance. Student t test (two tailed, dependent) has been used to find the significance of study parameters on continuous scale within each group.

Graph 1: Showing Stress feelings students have experienced in past 3 months.

Graph 2: On a scale of 1 to 5, 1 being not at all and 5 being completely, how much do your feeling of being under pressure or being stressed, impact your daily life.

Graph 3: On a scale of 1 to 5, 1 being not at all and 5 being completely, how much does thinking about the future causes stress.

Graph 4: On a scale of 1 to 5, 1 being not at all and 5 being completely, how much does missing college and friends causes stress or pressure.

Graph 5: On a scale of 1 to 5, 1 being not at all and 5 being completely, how likely does lack of practical and clinical exposure during this pandemic causes stress or pressure.

Graph 6: What students do to manage feeling of being stress.

Descriptive Study was conducted on First year MBBS students for their feeling of stress in the past three months during the COVID shutdown. Graph 1 showed 60 percent student feeling low, 36 percent complain of change in appetite, 63 percent have Anxiety of not being able to cope and 57 percent students feeling irritable.

Graph 2 shows more than 50 percent students' daily activity is affected by stress.

Graph 3 shows more than 75 percent students are stressed thinking about their future. Graph 4 shows many are feeling stressed due to missing of college and friends. Graph 5 shows 75 percent students are feeling stressed due to missing practical and clinical exposure.

Results from our study shows students who are at home away from routine medical curriculum are feeling stressed. They have various reasons for stress missing practical experience which may impact their future clinical interactions being the main reason for stress in many. Basically, many students are stressed thinking of uncertainty.

Graph 6 shows what students do to cope up with their feeling of stress. More than 90 percent students who are stressed are try relaxation methods. Many students have opted for exercise groups, spirituality and music. 72 percent of students who are stressed have approached family members or friends for remedy. 5 percent students who are have opted for counselling from psychiatrists.

This study shows that none of the students have opted for college counseling or college mentors for their stress related issues.

5. Discussion

Lipson says that risk of Psychological stress is significantly decreased when students receive support, including support through online mental health resources, which are in high demand at the current moment. Survey data from March, April, and May show that 60 percent of students say the pandemic has made it more difficult for them to access mental health services.⁹

High level of stress was seen among the medical students in the initial years also suggest that, when students are admitted to the medical school, special care must be taken to find out obvious psychiatric problems or psychological stress among them. This points to the need for establishing counselling and preventive mental health services as an integral part of routine clinical services being provided to the medical students.⁵

This study showed in the past three months during the shutdown, 63 percent of students were feeling low, 60 percent students said they are feeling anxious. 60 percent felt irritable. 30-50 percent students are completely stressed of missing on regular classes, practical and clinical exposure, uncertainty of exams and uncertain future. More than 5 percent students are sorting medical help for the same. More than 90 percent of students who are stressed are trying many relaxation methods. None of the students have opted for any college faculty or councilors for help during this crisis.

6. Conclusion

More than 50 percent medical students are stressed and are having symptoms None of them have opted for guidance or counselling from the colleges. From this study, I conclude that all colleges must provide college councilors or staff to help students deal with their stress during such crisis. On a regular basis, student must be made aware of counsellors or mentors in college or attached hospital, whom they can consult when needed.

7. Source of Funding

None.

8. Conflict of Interest

Nil.

Acknowledgements

The author gratefully acknowledges all those medical students who participated and contributed to the study.

References

1. UNESCO Education on disruption to recovery (online). 2020(May 25). Available from: <https://en.unesco.org/covid19/educationresponse>.
2. Singh G, Hankins M, Weinman JA. Does medical school cause health anxiety and worry in medical students? *Med Educ.* 2004;38(5):479–81. doi:10.1046/j.1365-2929.2004.01813.x.
3. Wilkinson TJ, Gill DJ, Fitzjohn J, Palmer CL, Mulder RT. The impact on students of adverse experiences during medical school. *Med Teacher.* 2006;28(2):129–35. doi:10.1080/01421590600607195.
4. Styles WM. Stress in undergraduate medical education: 'the mask of relaxed brilliance'. *Br J Gen Pract.* 1993;43:46–7.
5. Hamza M, Abdulghani1, Abdulaziz A. AlKanhah et al; Stress and Its Effects on Medical Students: A Cross-sectional Study at a College of Medicine in Saudi Arabia. *J Health Popul Nutr.* 2011;29(5):516–22.
6. Nanda PK. Govt advises adhering to academic schedule through online classes, Mint E paper. Available from: <https://www.livemint.com/news/india/govt-advises-adhering-to-academic-schedule-through-online-classes-11586932049133.html>.
7. Saraswathi I, Saikarthik J, Kumar KS, Srinivasan KM, Ardhanaari M, Gunapriya R. Impact of COVID-19 outbreak on the mental health status of undergraduate medical students in a COVID-19 treating medical college: a prospective longitudinal study. *PeerJ.* 2020;8. doi:10.7717/peerj.10164.
8. Cao W, Fang Z, Hou G, Han M, Xu X, Dong J, et al. The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Res.* 2020;287. doi:10.1016/j.psychres.2020.112934.
9. Jahnke A. New research uncovers COVID-19's impact on college student mental health and well-being, the American Association for the Advancement of Science (AAAS), Source. Available from: <http://www.bu.edu/articles/2020/college-students-covid-19-increased-depression-rate-and-raised-barriers-to-mental-healthcare/>.
10. Healthwatch-Students-Stress-Engagement-Report. Available from: <https://www.healthwatchesouthglos.co.uk/sites/healthwatchesouthglos.co.uk/files/Healthwatch-Students-Stress-Engagement-Report.pdf>.

Author biography

Chaitra M S, Associate Professor

Shruthi K, Assistant Professor

Pushpa G, Assistant Professor

Chaitra N D, Tutor

Cite this article: Chaitra M S, Shruthi K, Pushpa G, Chaitra N D. Study of stress in medical student during COVID pandemic. *Indian J Clin Anat Physiol* 2021;8(1):7-10.