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## Disregard To Mental Well-Being In Undergraduate Medical Students Is An Alarm For Health Care System-Do We Agree.

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### ABSTRACT

Education in general is stressful for the students especially in medical college. The students were forced to attend online classes and clinics, practical were converted into video demonstration during the recent pandemic. As a result of this the students underwent a lot of stress in the form of academic overload, network issues, not able to understand the subject due to lack of direct interaction with the teachers and an incomplete sense of attending the clinics without seeing the patients. In order to overcome these stress there is a need for counselling services to be made available to all the students in each institution. Hence this topic is chosen to determine the prevalence of stress and the mental health of the undergraduate students. After receiving the IEC the cross sectional questionnaire based study was introduced using Cohen's perceived stress scale (PSS) and medical student's stressor questionnaire (MSSQ), to a total of 120 pre-final and final year undergraduate medical students. The mean and standard deviation of the students from Cohen's perceived scale is 22.50+4.055. The frequent stressor being not trained enough in their clinical skills, getting poor marks during their exams, heavy workload and falling behind in their reading schedule, lack of time to review what has been learnt, poor motivation to learn and feeling of incompetence. There is lot of stress prevailing among medical students. This study would help the institutions to set up counselling center for the welfare of the mental health of the students.

**Keywords:** Education, online, covid, stress, depression, skill training.

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## INTRODUCTION

Stress has been defined by Gray Toft and Anderson as an' internal cue in the physical, social or psychological environment that threatens the equilibrium of an individual [1]. It has been viewed as a complex and dynamic transaction between individuals and their environment. Stress usually occurs when one is confronted with a situation which is overwhelming and one cannot cope with the situation [2]. Stress causes a complex interaction between neurologic and endocrinological system which may result in fight or flight response [3].

Stressors are defined as any situations or events in life which may affect the health of the individual. It can be broadly classified as external or internal based on the source of stress. The sources of stress may be due to psychological stress, adjustment problems, and difficulty in social interaction, medical illness or any medical procedure [4].

Education in general is stressful for the students especially in medical college. When compared with the age matched population medical students have higher prevalence of depressive symptoms and suicidal ideation. This distress manifests in variety of ways like burnout, depression, anxiety, poor mental or physical quality of life [5].

Deterioration of mental health has serious professional ramifications like lack of empathy, interest in caring for underserved population, ethical conduct and professionalism, their responsibility to the society and many may think of dropping out of medical schools not able to coping with the stress levels. Stress can lead to serious personal complications to the students as well like substance abuse, broken relationships and suicidal ideation [6].

The recent COVID 19 pandemic has not only brought about the risk of death from infectious pneumonia but severe psychological stress among the students affecting their mental health due to varied reasons. [7] Learning environments like online classes, evaluation/grading system, clerkship organisation, lack of administrators or faculty support were some problems which affected the mental health of students during the pandemic.

There is a need to identify the stress levels and stressors which affect the mental health of the medical students and each institution should take measures in order to identify and support the mental health of the students. Hence the present study was undertaken in order to identify the prevalence of stress and to determine the source of stress among undergraduate medical students.

## MATERIALS AND METHODS

This study is a cross sectional questionnaire-based study conducted among the pre-final year and final year medical students

### Settings And Participants

The study design was approved by the Institute Research and Ethics Committee (ethics approval number IEC: RC/2021/03) All the 150 students of pre-final year and final year at Pondicherry Institute of Medical Sciences who gave voluntary consent were invited to participate in the study. The students were briefed about the study design, its objectives and were recruited for the study after obtaining informed consent.

### Design

It is a cross sectional questionnaire-based study which was given to the pre-final year and final year students.

### Questionnaire

Cohen's perceived stress scale (PSS) and medical student's stressor (MSSQ) questionnaire was sent to the students who gave informed consent as Google forms. The PSS Questionnaire is a brief and easy to administer tool to measure the level of stress among the students. It measures the degree to which

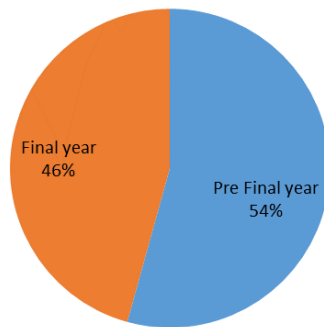
situation in one's life are appraised as stressful. The questions in this scale ask about the student's feelings and thoughts during the last month. It consists of 10 questions and each question were graded on a 5 point Likert scale from 0-4 (0-Never, 1-Almost never, 2-Sometimes, 3-Fairly often, 4-Very often).

The MSSQ questionnaire asked about the students' stressors. It can be used to identify the student's stressor and to identify the intensity of the stressor. It consists of 17 questions and each question is graded on 5-point Likert scale 0-4. (0 - Causing no stress at all, 1 - Causing mild stress, 2- Causing moderate stress, 3 - Causing high stress, 4 - Causing severe stress).

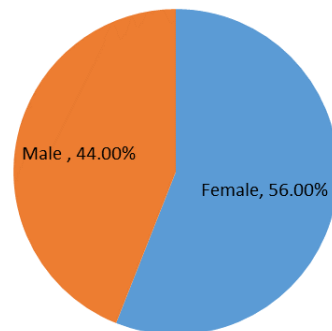
**RESULTS**

About 116 students from pre - final year and final year participated in the study

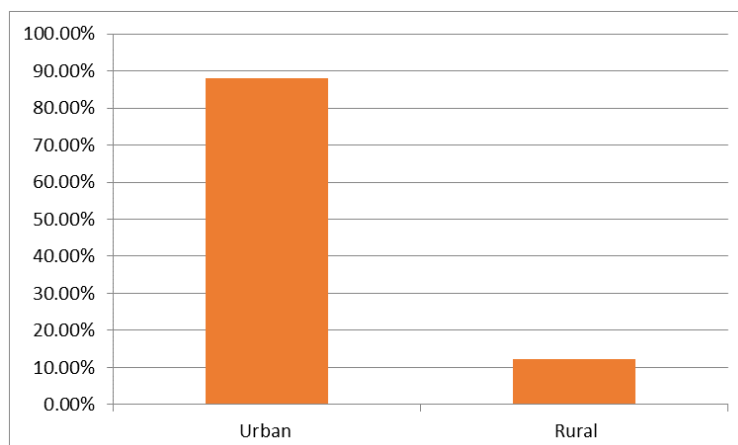
**Figure 1: Shows the number of pre-final year and final year students participating in the study**



**Figure 2: Shows the percentage of males and females who participated in the study  
Out of the participants 56% were females and 44% were males.**



**Fig 3: Shows the percentage of participants from urban and rural areas  
Out of the participants 87.9% were urban population and 12.1% were from rural population**



**Table 1: Shows the students response to Cohen’s perceived scale**

S.No	ITEMS	Never (n) %	Almost never(n) %	Sometimes (n) %	Fairly often (n) %	Very Often(n) %
1.	In the last month, how often have you felt that you were unable to control the important things in your life	7.8	9.5	<b>58.6</b>	19.8	4.3
2.	In the last month, how often have you felt nervous and “stressed”	0.9	5.1	<b>44.0</b>	<b>32.8</b>	17.2
3.	In the last month, how often have you felt confident about your ability to handle your personal problems	1.7	10.3	<b>34.5</b>	<b>36.2</b>	17.2
4.	In the last month, how often have you felt that things were going your way	1.7	10.3	<b>54.3</b>	<b>29.3</b>	4.3
5.	In the last month, how often have you found that you could not cope with all the things that you had to do	5.2	9.5	<b>50.9</b>	<b>30.2</b>	4.3
6.	In the last month, how often have you been able to control irritations in your life	1.7	15.5	<b>35.3</b>	<b>37.9</b>	9.5
7.	In the last month, how often have you felt that you were on tops of thing?	7.8	22.4	<b>50</b>	17.2	2.6
8.	In the last month, how often have you been angered because of things that were outside of your control	5.2	16.4	<b>38.8</b>	<b>31</b>	8.6
9.	In the last month, how often have you felt difficulties were piling up so high that you could not overcome them	6.9	21.6	<b>31.0</b>	<b>32.8</b>	7.8
10.	In the last month, how often have you been upset because of something that happened unexpectedly	4.3	16.4	<b>37.1</b>	<b>30.2</b>	12.1

Cohen’s perceived scale enquires about the student’s feelings and thoughts during the last month. Majority of the students felt that sometimes and very often during the last month they experienced symptoms of stress like they were unable to control important things in life, not confident to handle the personal problems, not able to control the irritation, angry because of things not under our control, not able to overcome the difficulties, being upset about things. The mean and standard deviation of the students from Cohen’s perceived scale is 22.50+4.055.

**Table 2: Shows students response to medical student’s stressor questionnaire among prefinal year and final year**

S. No	STRESSOR	Prefinal Year severe stress (%)	Final Year severe stress (%)
1.	Tests/Examinations	26	31
2.	Getting poor marks	31	26
3.	Participation in class presentation	8	10
4.	Need to do well (Self expectation)	25	30
5.	Participation in class discussion	5	10
6.	Parental wish for you to study medicine	7	10
7.	Heavy workload	22	27
8.	Feeling of incompetence	19	27
9.	Poor motivation to learn	18	15
10.	Falling behind in reading schedule	23	22
11.	Not enough feedback from teachers	7	9
12.	Lack of time to review what have been learnt	22	32
13.	Frequent interruption of my work by others	15	14
14.	Not enough medical skill practice	31	36
15.	Lack of recognition for work done	17	24
16.	Large amount of content to be learnt	34	33
17.	Unable to answer the questions from the teachers	19	26

Medical student’s stressor questionnaire talks about the various factors which is causing stress among our medical students. The frequent stressor being not trained enough in their clinical skills, getting poor marks during their exams, heavy workload and falling behind in their reading schedule, lack of time to review what has been learnt, poor motivation to learn and feeling of incompetence.

### DISCUSSION

There is a growing concern about stress among the undergraduate medical students during their training. Medical undergraduates face high level of stress the reasons being varied among different medical colleges. This has resulted in the lower academic performance, increased suicidal rates, substance abuse, problems in interpersonal relationships, adverse health consequences. This issue needs to be addressed and students needs more counselling and support to relieve their stress. Hence, this study was undertaken in order to study the prevalence of stress and the source of stress among the pre-final year and final year undergraduate students at Pondicherry Institute Of Medical Sciences.

The mean and standard deviation of the Cohen’s perceived stress score in our study was 22.50 and 4.055 respectively. It was similar to the study done by Renu Sethian et.al where the mean score and standard deviation was 25.53 and 5.55. It was higher than the study done by Sakthivel et.al in Tamil Nadu where the mean scores were 17+6.5 and by Bhavani Nivetha et.al where the mean scores and standard deviation was 17.7 and 5.5 respectively. However, it was less than the study done by Chowdary et.al where it was 29.58 and 6.6 and another study by Brahmhatt et.al where the mean scores were 27.53. These differences in the values may be attributed to the different geographical areas, college environment and regional social cultural factors which has influenced the student’s mental health. But the stress levels are definitely high among the medical students.

In the present study 87.9% of the students are from the urban population and 12.1% are from the rural population. The high level of stress may be attributed to the fact that most of them are single children, born in nuclear families; doctor parents. Much of these may have contributed to their lack of development of interpersonal skills, adjustment problems, not able to cope up with difficult situations.

The mean and standard deviation of the stress in pre-final year and final year were almost similar in our study being 22.92 and 3.797 in final year and 22.14 and 4.257 in pre-final year. This was different from the study conducted by Shahida et.al where the stress levels were more in first year and final year as 75% and 71% and also by Satheesh et.al where the stress levels were high among the first year and final year as 53.3% and 84.6% respectively. The high level of stress among final years may be due to the high academic load and the stress to clear the exams.

In the present study majority of the students stated that the academic stressor was the major source of stress like fear of exams, getting poor marks in exams, not able to develop enough clinical skills because of online clinics during the pandemic, large amount of content to be learnt, lack of time to review what was already learnt. It was similar to the study by Nivetha et.al 40.9% of students stated that academic related stressor to be the source of high stress followed by inter and intrapersonal related stress of 33.3%. It was also comparable to a study done by Gupta et.al where 94% had academic related stressor and 78% had interpersonal stressor. This may be due to the vastness of the medical syllabus and lack of proper time management lessons for the students.

Nivetha et.al stated various coping mechanism which the student adopted to overcome the stress like sleep, dance, talking with friends and family, watching movies, Yoga and praying, being alone and self-evaluation, eating, social media and substance abuse was the last. So students try to reduce their stress by either of the above said mechanisms but in spite of this if the students are not able to manage their stress then the institution should have counsellors and counselling sessions in order to address these issues and to guide the undergraduate students in the right path [8-14].

Based on the results from our study we were able to bring about certain changes in our institution like establishment of:

- **Student support and guidance cell** where the faculty from different departments volunteered in order to help the students, listen to their problems and suggest ways to cope up with the stress and if they felt that they needed help they were referred to the team of doctors in the psychiatry department for further evaluation.
- **Stress management sessions** are conducted by the psychiatry department for all the batches where there is one to one interview with the students by using a questionnaire. This is a highly sensitive questionnaire which identifies the high risk students. Those who were in the high risk will be further evaluated and treated.

## CONCLUSION

Since academic stressor are the major source of stress for many undergraduate medical students they should be equipped with different skills like time management, prepare a road map before preparing with exams, peer discussion, to strengthen mentor mentee relationship, to involve more in sports and cultural programmes and also to involve themselves more in spiritual activities.

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