

Assessment of mental well-being in second-year medical students

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Abstract:

Background: Medical education is the most stressful compared to any other courses. Every student who enters medical school must come across a lot of hardships.

Aims and objectives: The present study was undertaken to assess the mental well-being of the students so that can offer counselling to them with management strategies.

Materials and methods: A total of 90 second-year MBBS students were part of the study after obtaining written informed consent. Depression, anxiety, and stress were assessed using a standard questionnaire called DASS. This is a self-administered questionnaire and is freely available online. Spatial and verbal memory test was used to assess the participants' cognitive functions. These are standard tests available in the literature.

Results: Depression scores were significantly higher in females when compared with males. Anxiety scores were significantly higher in females when compared with males. Stress scores were significantly higher in females when compared with males. Spatial and verbal memory scores were significantly higher in females when compared to males.

Conclusion: The study results suggest that there are higher levels of depression, anxiety, and stress in female students when compared with males. Further detailed studies are needed in this area.

Keywords: Mental health, Medical students, memory

Introduction: Medical education is the most stressful compared to any other courses. Every student who enters medical school must come across a lot of hardships.¹ Once he enters medical school, academic pressure will lead to stress for the students. Further, expectations from the teachers and parents add additional stress to the students. Other factors that create stress are competition among students, examination stress, and financial stress.^{2,3} All these factors adversely affect the mental well-being of the students.⁴ These adverse effects may start from their first MBBS onwards where there will be a heavy load of syllabus and less time for them to complete it. As the years get promoted the levels of stress also increase.^{5,6} Collectively these factors affect his mental and physical health and deteriorate his quality of life.⁷ Academic performance also will be affected. Due to this student experience desolation and anxiety. Hence, this is a serious concern. There is a strong need to assess the mental well-being of the students in due course of time and suggest them coping strategies. The present study was undertaken to assess the mental well-being of the students so that can offer counselling to them with management strategies.

Materials and methods:

Study design: Cross-sectional study

Study Setting: Department of Pharmacology, Prathima Institute of Medical Sciences, Nagnoor, Telangana.

Study participants: A total of 90 second-year MBBS students were part of the study after obtaining written informed consent.

Inclusion criteria: Healthy participants, studying the second year of MBBS, both males and females were part of the study after obtaining written informed consent.

Exclusion criteria: Unwilling participants with severe complications were excluded from the study.

Assessment of depression, anxiety, and stress: Depression, anxiety, and stress were assessed using a standard questionnaire called DASS. This is a self-administered questionnaire and is freely available online.⁸

Assessment of cognitive functions: Spatial and verbal memory test was used to assess the participants' cognitive functions. These are standard tests available in the literature.⁹

Ethical considerations: The institutional human ethical committee approved the study protocol. Informed consent was obtained from all the participants before the commencement of the study.

Statistical analysis: Data was analyzed using SPSS 20.0 version. Student-t test was applied to assess the significance of the difference between the groups. A probability value of less than 0.05 was considered significant.

Results: Table 1 presents the demographic data of the participants. Table 2 presents the mental well-being status of the participants. Depression scores were significantly higher in females when compared with males. Anxiety scores were significantly higher in females when compared with males. Stress scores were significantly higher in females when compared with males. Spatial and verbal memory scores were significantly higher in females when compared to males.

Table 1: Demographic data of the participants

Parameter	Males (n=40)	Females (n=50)	P value
Age (years)	21±0.32	22±0.14	0.0027
Height (cm)	164±4.43	162±4.24	0.7470
Weight (kg)	65±2.21	54±2.55	0.0021

Data were presented as mean and SEM

Table 2: Depression, anxiety and stress, and cognition of the participants

Parameter	Males (n=40)	Females (n=50)	P value
Depression	16±0.95	19±0.99	0.0342*
Anxiety	12±0.47	16±0.71	<0.0001***
Stress	17±0.95	20±1.13	0.0521
Spatial memory	6±0.16	7±0.28	0.0049**
Verbal memory	5±0.16	7±0.28	<0.0001***

Data were presented as mean and SEM. *P<0.05 is significant. **P<0.01 is significant, ***P<0.001 is significant.

Discussion: Psychological distress is the major issue of concern in all the countries. The medical students were reported to have higher levels of distress compared with other students.¹⁰ The medical profession itself is stressful as it has lot of syllabi and less time.¹¹ It was reported that the mental health is normal in the students before entering the medical school but once they enter the medical school, the stress levels were increased.¹² Several factors were reported to cause the stress in the medical students.^{13,14} Earlier studies reported excessive stress in medical students.¹⁵ Hence, it is needed to assess the mental wellbeing in the medical students on a regular basis. The present study was undertaken to assess the mental health of the second year MBBS students. Depression scores were significantly higher in females when compared with males. Anxiety scores were significantly higher in females when compared with males. Stress scores were significantly higher in females when compared with males. Spatial and verbal memory scores were significantly higher in females when compared to males. Earlier studies estimated the levels of stress, anxiety and depression in the medical students and found that more than half of the students were affected with these negative psychological emotions. Further, the scores of depression, anxiety and stress were

higher in case of females when compared to males.¹⁶ Another study reported that the prevalence of anxiety is more than the depression and stress in the students. In the present study, we have observed higher level of scores in all the three parameters.¹⁷ Hence, earlier studies recommended regular monitoring of the depression, anxiety and stress scores and to identify those with higher levels of stress and counsel them with management techniques for their health benefit and also to improve their quality of life.

Conclusion: The study results suggest that there are higher levels of depression, anxiety, and stress in female students when compared with males. Further detailed studies are needed in this area.

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