Research Article

A study of mental distress in medical students

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Abstract

Background: Mental distress is defined as unpleasant mental or emotional state, often impairing one's ability to cope with day-to-day living. The undergraduate medical training is a stressful period and medical students undergo tremendous stress during various stages of the MBBS course. **Aims and Objective:** The objective was to study the prevalence of mental distress among the undergraduate students of medical college and to find out the correlation between mental distress and different explanatory variables among the study population. **Materials and Methods:** It was a cross-sectional study carried out on 339 undergraduate medical students (208 females and 131 males). We used a self-reporting questionnaire (SRQ-20) for the assessment of mental distress and correlated that with different explanatory variables. **Results:** Mental distress is more in second-year students, in female students as compared to male students, hostellers as compared to day scholars, students of rural background, and students who have repeated attempts in premedical entrance examination. **Conclusion:** Mental distress is common among medical students. The negative effects of long and tiring medical education on the psychological status of students have been shown in several studies. With early identification and effective psychological services, possible future illnesses may be prevented. As the study findings showed a high level of stress among the second-year students, we suggest supporting them and taking care of this group by the student support system. This will also help them cope well with stress in the later years. It is very important to target stress-prevention strategies at students who have any level of psychological stress to prevent the development of more serious conditions relating to stress.

KEY WORDS: Mental Distress; Self-reporting Questionnaire (SRQ-20); Undergraduate Students; Psychological; Explanatory Variables

Introduction

Mental distress or psychological distress is defined as unpleasant mental or emotional state, often impairing one's ability to cope with day-to-day living.[1] This is a term used, both by some mental health practitioners and users of mental health services, to describe a range of symptoms and experiences of a person's internal life that are commonly held to be troubling, confusing, or out of the ordinary. A person in mental distress may show some of the symptoms described in psychiatry, such as anxiety, confused emotions, hallucination, rage, and depression, without actually being "ill" in a medical sense. Different epidemiological studies on the prevalence of psychiatric morbidity among schoolgoing children and adolescents have reported a wide variation from 20% to 40%.[2] But mental health problems of medical students are a neglected domain still now as they do not belong to a particular target population. Owing to advancement in lifestyle and rapid urbanization, persons experience stress. The undergraduate medical training is a stressful period and medical students undergo tremendous stress during various stages of the MBBS course. Increasing competitiveness, aspiration for achievement, and parental and peer pressure have increased the vulnerability of medical students to mental distress. Little degree of stress is helpful for increasing the academic performance of students but high degree of stress leads to headache, forgetfulness, poor concentration, memory impairment, sleep disorders, substance abuse, and suicidal

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tendencies. Persistent stress, which is not resolved through coping or adaptation, deemed distress, may lead to anxiety or withdrawal (depression) behavior.[3] Stress that begin in the student period may continue to future life and if adjustments are not made, then inevitably a "correction" will occur, which may take the form of "burnout" or physical and/or mental impairment.[4] Our study is an attempt to identify mental distress in the life of medical students using a self-reporting questionnaire (SRQ-20). A score of 10 or more was the most sensitive and specific cutoff point.

Materials and Methods

It is a cross-sectional study carried out among the medical students of a private medical college and hospital in Amritsar, Punjab, India. A total of 351 students were selected for the study. Stratified random sampling was used for the selection of sample at each level of MBBS (first-year MBBS, 137; second-year MBBS, 117; third-year MBBS, 85). Data were collected from the students using SRQ-20. The SRQ-20 was developed as an instrument to screen for general psychiatric disturbances (WHO-20), and it has been found to be reliable, valid, and adaptable for screening mental disorders in many countries.[5] Cutoff point of 10 was taken to consider mental distress. Information on sociodemographic and other variables was collected separately to find correlation, if any.

Verbal consent was taken from the students and they were asked to fill the questionnaires with an open mind. Reasons for the study were explained. The study design was approved by the ethics and research committee of the institute.

Results

A total of 351 students participated in the study; 339 students returned the fully filled questionnaire; rest 12 incomplete questionnaires were rejected and not considered for the analysis. The study population comprised 61.4% females and 38.6% males. The composition of the study population was 40% first-year, 34% second-year, and 25% third-year MBBS students. Their mean age was 18.85 years (SD 0.99; minimum 17, maximum 22). The majority (87.30%) of students were between 18 and 20 years and only 12.70% were older than 20 years. Of them, 89.4% belonged to urban areas and 10.6% from rural background, as shown in Table 1. Among the study participants, 75.2% stayed in hostel and 24.8% were day scholars; 79.9% were from nuclear family and 20.1% belong to joint family setup; and 19.2% of the students were having medical background, that is, they belong to the family of doctors. Most of the students (72.9%) belonged to high socioeconomic status as this was a private medical college. Regarding the awareness about the vastness of syllabus, response is almost same. Almost 80% of the students were found to be able to cope with different situations using different means. The major reasons to join MBBS were parent's wish (42.5%), to serve the society (40.4%), and to earn money (17.1%). Table 2 shows that prevalence of stress is more in female medical students (19.5%) as compared to male medical students (14.9%). Mental distress is maximum in the second-year students (24.79%) followed by the first-year and third-year students. The prevalence of mental distress according to socioeconomic status does not show any statistically significant variation because almost all the students belong to high socioeconomic status. Stress is also significantly more among

Table 1: general characteristics of the study population

Sociodemographic variables	Number	%
Year		
1st	137	40.4
2nd	117	34.5
3rd	85	25.1
Age (years)		
18–20	296	87.3
21–22	43	12.6
Gender		
Male	131	38.7
Female	208	61.3
Location		
Urban	303	89.4
Rural	36	10.6
Stay		
Hostler	255	75.2
Day scholar	84	24.8
Family		
Nuclear	271	79.9
Joint	68	20.1
Parents profession		
Doctor	65	19.2
Non-doctor	274	80.8
Socioeconomic status		
Upper socioeconomic status	247	72.9
Upper middle socioeconomic status	92	27.1
Vastness		
Not knowing the vastness	183	54
Knowing the vastness	156	46
Can cope		
Not coping with situation	67	19.8
Coping with situation	272	80.2
Stress		
Normal—when stress level is less than 10	288	85
Stress—when stress level is equal to more than 10	51	15
Joined MBBS		
To serve society/own wish	137	40.4
To earn money	58	17.1
For parents wish	144	42.5
Attempt		
1	235	69.3
2	101	29.8
3	3	0.9

Table 2: Relationship between explanatory variables and mental distress

Variables	Mental distress				Significance		
	Absent	(%)	Present	(%)	χ^2	df	*P*
Gender							
Male	114	(87.02)	17	(12.98)	0.714[a]	1	0.398
Female	174	(83.65)	34	(16.35)			
Year							
1st	117	(85.40)	20	(14.60)	19.421[a]	2	0
2nd	88	(75.21)	29	(24.79)			
3rd	83	(97.65)	2	(2.35)			
Age							
17–20	10	(90.91)	1	(9.09)	10.475[a]	5	0.063
21–22	29	(100.00)	0	(0.00)			
Location							
Urban	262	(86.47)	41	(13.53)	5.110[a]	1	0.024
Rural	26	(72.22)	10	(27.78)			
Stay							
Hostler	210	(82.35)	45	(17.65)	5.455[a]	1	0.02
Day scholar	78	(92.86)	6	(7.14)			
Family							
Nuclear	225	(83.03)	46	(16.97)	3.937[a]	1	0.047
Joint	63	(92.65)	5	(7.35)			
Profession							
Doctor	56	(86.15)	9	(13.85)	0.090[a]	1	0.764
Non-doctor	232	(84.67)	42	(15.33)			
Income							
Upper socioeconomic status	215	(87.04)	32	(12.96)	3.107[a]	1	0.078
Upper middle socioeconomic status	73	(79.35)	19	(20.65)			
Vastness of syllabus							
Not knowing the vastness	150	(81.97)	33	(18.03)	2.779[a]	1	0.096
Knowing the vastness	138	(88.46)	18	(11.54)			
Can cope							
Not coping with situation	45	(67.16)	22	(32.84)	20.681[a]	1	0
Coping with situation	243	(89.34)	29	(10.66)			
Joined MBBS							
To serve society/own wish	125	(91.24)	12	(8.76)	8.020[a]	2	0.018
To earn money	49	(84.48)	9	(15.52)			
For parents wish	114	(79.17)	30	(20.83)			
Attempt							
1	207	(88.09)	28	(11.91)	6.173[a]	2	0.046
2	79	(78.22)	22	(21.78)			
3	2	(66.67)	1	(33.33)			

the students belonging to nuclear family, coming from rural area, hostellers, and the students who are not able to cope with the vastness of the syllabus [Table 2].

Discussion

In our study, we evaluated perceived mental distress among medical students including its sources and severity, which may be of importance to both medical teachers and psychologists. This study confirmed the general impression that medical students experience higher levels of stress as compared to the general population of the same age group.[6,7] The overall prevalence of mental distress found in this study was 15.04%. A high prevalence of distress among medical students is a cause of concern as it may impair behavior of students, diminish learning, and ultimately affect patient care after their graduation. Studies carried out in other countries and in other states of India have also reported higher prevalence of stress among medical undergraduates. A study from Saudi Arabia reported prevalence of stress among 57%

students,[8] and a survey conducted by Saipanish[9] reported that 61.4% of students in a Thai medical school had come across some degree of stress during their training period. Another study, carried out in Sindh (Pakistan) reported that overall 85% of students felt stressed at one or other time during their study period.[10] A study conducted in Mumbai (India) reported that 73% of the students perceived stress at some point or the other during their medical schooling.[11] Other two studies from Pakistan found that more than 90% students experienced stress during their course.[12,13] The amount and severity of stress experienced by medical students may vary according to the settings of the medical college, the curriculum and the assessment system, and different extracurricular activities. Also, different parameters have been used in these studies to measure the stress. This limits the comparability among these studies.

Some studies have reported that female students experience more depression, anxiety, and stress as compared to male students[14,15] whereas others have reported no gender difference in the prevalence of depression.[16] The trend in our study that more female students tended to experience depression than male students is similar to that reported by a previous study.[17] The trend that female students experience more stress than male students may suggest that female medical students are more competitive, tend to be more concerned about working hard to secure more marks in examinations, are more concerned about their performance, and tend to engage in less exercise.[13] Our study shows that mental distress is more common in the students who got admission in the MBBS course after appearing more than once in the entrance examination.[18] Mental disorders cause a decrease in concentration and consequently in memory, undermining the learning process and being responsible for low academic performance, thereby creating a vicious cycle that may contribute to a performance phobia.[19] We found in our study that mental distress is more in the students who are from rural background and also in the students residing in hostels. Hostellers bear the double brunt of separation from family and friends and have to face the challenging new learning environment, which may cause mental distress in them. In a study conducted among Canadian undergraduates, homesickness was found to be associated with health problems.[20] In our study, mental distress was found to be more common in second-year students; this is in line with the results of various other studies conducted earlier.[21] This is surprising as second-year MBBS is generally thought to be a year when there is less stress. However, another study also found that stress was more in second year of MBBS, and this might be due to excessive load of both preclinical and clinical subjects as compared to only clinical subjects in third year of MBBS.[22] Mental distress is less in students who are able to cope with the situation. We also analyzed other factors such as vastness of syllabus and found an association between the vastness of syllabus and mental distress. As the study was cross sectional, it simultaneously analyzed the outcome and exposure, hence the risk factors identified in this study are mere association only, not the causal ones. There may be many other factors associated with mental distress, which were not identified in this study. SRQ was used to measure the mental distress. It does not provide a specific psychiatric diagnosis, nor does it measure the degree to which help-seeking behavior occurs in response to these symptoms. Future analytical or follow-up studies involving large sample using categorical classification diagnostic system would be able to do a specific psychiatric diagnosis and explore the different causal factors in a better way. In spite of such limitations, the study has some positive findings. The study reveals that mental distress is a problem among medical students, and we have identified present occupancy, parents occupation, attempt in MBBS entrance examination, coping with the situation, socioeconomic status, sex, and place of residence as risk factors associated with stress. It is very important to detect psychiatric distress at an early phase so that treatment in the form of counseling, behavior therapy, cognitive therapy, and even pharmacotherapy can be considered for those affected. Therefore, psychiatric morbidity such as depression and anxiety can be prevented among our medical students and young doctors.

Medical Faculties should introduce Foundation Courses for new students, which provide an overview of what to expect in medical school, as well as lectures on study techniques, stress, and time management. To offer a more balanced medical education, talks on what life is like in the faculty, medical history, and the science and art of medicine should also be given. The final goal is to help students understand what is required of them and to help them adapt as rapidly as possible.[23]

Conclusion

The findings of the study suggest that the level of psychosocial stress is higher in the female students compared to the male students. The stress level is more in second-year students as compared to first year of the course. The findings of high level of stress among the second-year students also suggest that when students are exposed to the hospital atmosphere, special care must be taken to find out obvious psychiatric problems or psychological stress among them. The major finding of high psychological stress in the students of our medical college points to the need for establishing counseling and preventive mental health services as an integral part of routine clinical services being provided to the medical students.

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