Assesment of Mental Distress in Undergraduate Medical Students

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Abstract

Background: In the recent years, due to growing competitiveness and aspiration for achievement the pressure on the medical students has increased many folds and makes them more vulnerable for developing mental distress and thus contributes to poor academic performance.

Aim: The study was conducted to measure the level of mental distress among the undergraduate medical students.

Methods: It was a cross-sectional study among the undergraduate students in a medical college, Bangalore, India, using SRQ-20 for the assessment of mental distress

Results: With the cut off value of 7, the prevalence of mental distress was found to be 30.39%. Female students had higher mental distress when compared with male students which was statistically significant ($p<0.001$).

Conclusion: Considering the prevalence of mental distress and especially, the more vulnerable female student population, preventive measures should be taken to overcome this issue.

Key words: Mental distress, SRQ, Undergraduate, Medical students

Introduction

WHO defines "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." The positive dimension of mental health is stressed in WHO's definition as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. Worldwide, about 500 million people are believed to be suffering from neurotic, stress-related and psychological (somatoform) problems. [1] In India, surveys on mental morbidity in various parts of the country suggest a prevalence rate of 18-20 per 1000. [2] The social, biological and psychological strengths of the past are slowly being replaced by a consumer-driven lifestyle, leaving people more vulnerable to social, mental and psychological problems at all ages. [3]

Recently stress during medical training is increasingly being reported in published literature. Previous studies have shown fairly high levels of distress, such as symptoms of depression [4, 5] anxiety and even suicide thoughts[6,7] among medical undergraduates. The potential negative effects of emotional distress on medical students include impairment of functioning in class-room performance and clinical practice, stress-induced disorders and deteriorating performance. [8] Perceived medical stress has also been linked to current mental distress [9] and to forthcoming health problems. [10]

Very few studies have been done among the particular group in India and one of it being by Chattarjee et al. [11] The studies on mental distress in medical students from India and from abroad has focused on the overall general mental status of the students, not considering the role of gender. As WHO report on mental health reports that psychological distress affect women to a greater extent than men across different countries and different settings. In this background the present study was undertaken with the objectives to assess mental distress among the undergraduate medical students and to analyze any difference among male and female students.

Methodology : The Study was a descriptive cross sectional study conducted at Sapthagiri Institute of Medical Science and Research Center, Bangalore, India during the period of April 2014 to July 2014. The population for this study comprised all undergraduate (MBBS) medical students of 1st & 2nd, 3rd, 4th, and 6th semesters. All students present in their respective class

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on the day of the study were included. The participants were informed about the nature and purpose of the study and were assured of confidentiality. It was explained that responding to the questionnaire was voluntary and there would be no monetary or other direct benefits from participation. Written informed consent was obtained from each participant. Those who refused were to be excluded. The study protocol received clearance from the Institutional Ethics and Research Committee. Students were given the questionnaires which comprised of personal data and Self Reporting Questionnaire (SRQ-20).

Personal data: This included age, sex, term of study

Self-Reporting Questionnaire- In order to measure the presence of mental distress, the self-reporting questionnaire of 20 items (SRQ20) (8) developed by WHO was administered. This consists of 20 yes/no questions with a reference period of the preceding 30 days. It has acceptable levels of reliability and validity in developing countries and is recommended by the World Health Organization(WHO) as a screening tool. [13] The SRQ-20 reflects the multidimensional nature of 'mental illnesses. Factor analyses have shown that one group of the questions taps into a somatic factor (headaches, appetite, digestion, sleep); another into depressive/anxiety symptoms (frightened, unhappy, cry, worthless); while a third captures a more cognitive/decreased energy factor (can't think or make decisions, work suffering, can't enjoy daily activities). [14] The questions of the instrument are written in a simple, easy to understand language which encompassed many important areas of psychopathology. Its administration took 5-10 minutes per individual. We took the cut off value at 7 as described earlier by Chattarjee et al.[11]

Data was analyzed using the Statistical Package using Microsoft Excel and Graph Pad PRISM. $P<0.05$ was considered statistically significant.

Results : Out of the 225 questionnaires distributed to the medical students, 204 were returned completed, giving a response rate of 94 %. Out of the 204 respondents, 80 (39.3%) were males and 124 (60.7%) were females. The reason for the more number of female respondents is that the institute where the study was conducted had more number of female students compared to male students. The mean age of male subjects was 19.36 years with a standard deviation of 1 and female subjects was 19.38with the standard deviation of 1.5.

At the cut-off point of 7, we identified 62 cases of mental distress, yielding a prevalence of 30.39 % for the total sample. It was also observed that the female students were more in mental distress when compared to males. At a cut off value of seven, 50 of 124 females (40%) and 12 out of 80 males (15%) are in mental distress. If lower cut-off points were used, the prevalence of mental distress would increase by 1.5 times at each lower threshold score. The value of mental distress for the total study population was found to be 6.22 with a standard deviation of 3.5. But when the sub analysis was done between the male and the female population it was found that the total SRQ score for males was 4.425 with a standard deviation of 0.3735 and females had a score of 7.151 with a standard deviation of 0.3533, which was found to be statistically significant ($p< 0.001$). Out of all the 20 questionnaire "yes" response for the females were higher when compared with the males except for the handshakes, where male students had a higher response when compared with females. From the table 1, it is observed frequent headaches (68.54%) was reported maximally, followed by feeling tired all the time (51.16%) and feeling nervous, tensed or worried (50%) by the female students respectively. In the case of male respondents too, frequent headaches (37.5%) remained highest response.

Discussion: The present cross-sectional study was conducted in a medical college in Bangalore among the undergraduate medical students to access the mental distress among them. The tool used was SRQ-20 which is a cost-effective and reasonably valid measure of both community and individual mental distress with a cut-off of 7/8, as it was validated and found most sensitive and specific in Indian context. The most significant findings of this study were that female students were in higher mental distress compared to the male counterparts which was statistically significant. Our results were consistent with findings in a community-based study at Dhaka [15] and among the young male university students. [16] Higher prevalence of mental distress was observed among the medical students at Tehran [17] and São Paulo, Southeastern Brazil. [18] In another study conducted in India where 18% prevalence of psychological distress was found among low-income urban women, using a relatively low cut-off score (7/8). It reveals that prevalence of mental disorder was varied in different studies. The reason might be that the studies conducted in different settings and different groups of population, scale used and cut-off point considered for assessing mental distress was not same in all these studies. It might also be due to the differences in the infrastructure of medical colleges where the studies were performed have a direct effect on the teaching-learning process and consequently on the prevalence of mental distress and influences of genetic and behavioral factors prevailing at different places. Similar to our study it was reported that women had proportionately higher rates of stress and

depressive symptoms in both the general population and the population of students of medicine. [19, 20] Fisher et al. also found that female students had increased levels of depression, anxiety, and phobias compared with their male counterparts. [21]Being female, the environment and social support they exposed in most cultures might be caused for higher prevalence of mental distress among the females. [22] However in a study among first year medical students Guthrie et al. did not find any significant difference of psychological morbidity between men and women. [23] Poor academic performances was a contributory factor for developing mental distress. 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. [24]We found in our study that mental distress was associated with students who had come from rural areas and presently residing in the hostel. The students who reside in the hostel are faced with the challenges of being uprooted from family and friends and demanding new learning environment might contribute for development of mental distress. In a study among Canadian undergraduates Adalf et al. also reported homesickness was associated with mental health problems. [24] In India, a study was conducted on the stress level of professional and non-professional students from urban area of Kanpur city. The main findings were professional students have more stress. The results indicated that professional students were poorly emotionally adjusted in comparison to non-professional group. So it is concluded that Professional students have more stress as compared to non-professional students. [25]

Our study has its share of shortcomings. Although we included almost all the students currently on our institution's rolls, conducting the study as a multi centric survey would have improved the generalizability of the findings. We were unfortunate that the data from 5th semester students were lacking. In addition, most of the data were obtained from self-reporting questionnaires and thus object to a potential source of bias. Despite these limitations, the current study has been able to throw some light about the mental health of medical students and especially female students.

Conclusion

Findings of this study indicated that psychological morbidity was common in medical students and this phenomenon was more obvious among female students. The psychological well-being of medical students needs to be more carefully addressed, and closer attention to eliminating the risk factors may prevent consequent distress. Further studies based on larger sample sizes are recommended to explore causes, consequences, and solutions for this problem rather than simply describing it. Our findings emphasize the importance of screening for mental distress of medical students during training on a regular basis for early detection and taking appropriate intervention like group counseling or stress management training.

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Table1. Depicts the questionnaires divided into somatic, psychological and cognitive/decreased energy symptoms between the male and female respondents.

SRQ-20 response list

Somatic symptoms	**Males (Yes response in %)**	**Females (Yes response in %)**
Do you have frequent headaches?	37.5	68.54
Is your appetite poor?	13.75	25
Do you sleep badly?	28.75	40.32
Do you have handshakes?	32.5	20.96
Is your digestion poor?	13.75	24.19
You have uncomfortable feeling in your stomach?	12.5	31.45
Psychiatric symptoms		
Are you easily frightened?	18.75	39.51
Do you feel nervous, tense or worried?	26.225	50
Do you feel unhappy?	23.75	41.12
Do you cry more than usual?	15	31.45
Are you unable to play a useful part in life?	18.75	33.06
Have you lost interest in things?	17.5	30.64

Do you feel that you are a worthless person?	23.75	23.38
Has the thought of ending your life been on your mind?	17.5	29.03
Cognitive/ decreased energy		
Do you have trouble thinking clearly?	22.5	36.29
Do you find it difficult to enjoy your daily activities?	21.25	32
Do you find it difficult to make decisions?	35	49.19
Your daily work suffering?	23.75	33.06
Do you feel tired of the time?	35	41.12
Are you easily tired?	30	51.16

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