

Research Article**Exploratory Study to Access Anxiety, Depression and Stress among Medical Students, Freshly Starting Their Medical Education in a Medical College**Prakash Mehta*¹, Komal Thekdi², Milan Rokad³, Kamlesh Patel⁴, Amit Bhadu⁵, Pragna Sorani⁶¹Professor, Department of Psychiatry, C.U. Shah Medical College, Surendranagar, Gujarat, India²Assistant Professor, Department of Preventive and Social Medicine, C.U. Shah Medical College, Surendranagar, Gujarat, India³Resident, Department of Psychiatry, C.U. Shah Medical College, Surendranagar, Gujarat, India⁴Professor & Head, Department of Psychiatry, C.U. Shah Medical College, Surendranagar, Gujarat, India⁵Resident, Department of Psychiatry, C.U. Shah Medical College, Surendranagar, Gujarat, India⁶Resident, Department of Psychiatry, C.U. Shah Medical College, Surendranagar, Gujarat, India***Corresponding author**

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Abstract: It was an exploratory study to access depression, anxiety and stress among fresh medical students. The study included new batch of medical students sized 73 were assessed by self-reporting scale depression, anxiety and stress Scale (DASS-42). Result was analyzed by appropriate statistical method. Results had shown significant proportion of student had depression, anxiety and stress. From result it is advisable that screening and intervention should be earliest.

Keywords: Medical students, depression, anxiety, stress

INTRODUCTION

Medical college in Surendranagar has intake capacity of 100 under graduate medical students per year. Getting admission in a medical college requires at least three years of excellent scholastic performance and competitive success in scholastic board examination at state and national level. These are highly stressful three years. After which, successful students realize their dreams. But they enter their new career with trepidation of tough, unknown and awesome field. We explored their level of anxiety, depression and stress by administering a self-reported rating scale DASS (42) [1].

The Depression Anxiety Stress Scale (DASS): The DASS (Lovibond & Lovibond, 1995a) is a set of three self-report scales designed to measure the negative emotional states of depression, anxiety, and stress. The DASS was constructed not merely as another set of scales to measure conventionally defined emotional states, but to further the process of defining, understanding, and measuring the ubiquitous and clinically significant emotional states usually described as depression, anxiety and stress.

The DASS is a 42-item self-report inventory and was developed to extend the understanding and differentiation of the most commonly reported difficulties; depression, anxiety and stress. Further, the intent was to identify the core features of each construct and delete any item overlaps that were associated with difficulties in differentiating the three constructs.

The intrinsic relationship between medical school and stress is reported by students worldwide. One in five students strongly felt the need to conceal mental or emotional problems. Reasons given included feeling there was no need to, concerns they would not be believed, fears of being discriminated against, judged or stigmatized, concerns of privacy and confidentiality being breached, embarrassment and previous negative experiences. So the role of screening becomes important. Firth found that nearly a third of medical students and half of junior doctors in their preregistration year were suffering from emotional disturbance [2]. The BMA has recently published a document on stress within the medical profession [3], but, although comprehensive, it contains no references or information about measured levels of stress or psychological symptoms in senior hospital doctors. Midtgaard *et al* found 31% of Norwegian medical students had mental health problems in their first 3 years of medical school which required treatment [21]. An Australian study by Leahy *et al* found 44% of medical students were psychologically distressed [20]. Ganguli HC [17], reported prevalence of depression 34/1000 and anxiety 16/1000 in India.

The inability to cope successfully with the enormous stress of medical education may lead to a cascade of consequences at both a personal and professional level. Stress has been shown to have deleterious effects on person's physical and mental well-being [4]. The extreme stress levels inherent in the medical profession and in preparing for it, put premedical and medical students at risk for both physical and psychological problems. However, the

normalization of stress is an often overlooked yet critical negative outcome. Stress, when experienced on a constant or regular basis, may become a familiar state and a 'typical' part of life. Unfortunately, excessive stress can then potentially become unrecognizable, by medical students and doctors alike, until the effects of professional burnout become all too apparent. Potential consequences of stress include alcohol /drug abuse [5], interpersonal relationship difficulties [6], depression and anxiety [7], and suicide [8]. Many of these problems develop during medical school [9]. A study by Salt and colleagues [11], reported that Harvard and Tufts medical students showed an increase in depression from 13% at the beginning of medical school, to 24.5% by the end of the second year. Stress may affect not only medical students' personal well-being, but may also have negative consequences on their professional effectiveness by diminishing the humanistic qualities fundamental to optimal patient care. Empathy, defined by Rogers [19] as (a) the capacity to understand, be sensitive to, and feel what another is feeling, and (b) the ability to communicate this sensitivity to the person, is arguably a crucial element of the doctor-patient relationship. Research suggests that the quality of the doctor-patient relationship has an impact on general patient well-being [10], medical compliance [11], and recovery from

surgery [12]. However, rather than helping students cultivate empathy, medical school may play a role in decreasing it. A recent study found that empathy levels, measured by the Empathy Construct Rating Scale (La Monica, 1981), decreased significantly between entry to medical school and the end of the first year [13].

Objective

To access level of anxiety, depression and stress among medical students freshly starting their medical education in a medical college at Surendranagar, Gujarat, India.

METHODOLOGY

A total of 73 undergraduate medical students of 1st year of C.U.Shah medical college were selected recently admitted in institute. Among them 43 were boys and 30 were girls. Each of them was presented with one copy of questionnaire to assess depression, anxiety, and stress (DASS42) at the first week and eighth week of admission. Informed consent was taken from each participant after explaining them the objectives of the study. The study was approved by institutional ethical committee.

RESULTS

Table 1: All mean score for depression, anxiety and stress

	depression		anxiety		stress	
	1 st week	8 th week	1 st week	8 th week	1 st week	8 th week
Mean ±SD	5.27027±5.39	4.819444±4.44	5.86±3.90	5.27±4.5	6.75±4.94	6.98±5.17

Table 2: Positive for depression: Average 11/73 (15%): Cutoff score 10 & more

1 st week	8 th week
10	12

Table 3: Depression Ranks at first week and eighth week

		N	Mean Rank	Sum of Ranks
8 th week - 1 st week	Negative Ranks	35 ^a	33.71	1180.00
	Positive Ranks	30 ^b	32.17	965.00
	Ties	9 ^c		
	Total	74		

a. 8th week < 1st week b. 8th week > 1st week c. 8th week = 1st week

Table 4: Depression statistical analysis

Wilcoxon Signed Rank Test	8 th week - 1 st week
Z-based on positive ranks	-.705
P value	.481

Table 5: Anxiety: Positive for anxiety: Average 19/73 (26%): Cutoff score 8 & more

1 st week	8 th week
23	15

Table 6: Anxiety Ranks at first week and eighth week

		N	Mean Rank	Sum of Ranks
8 th week - 1 st week	Negative Ranks	35 ^a	34.57	1210.00
	Positive Ranks	29 ^b	30.00	870.00
	Ties	10 ^c		
	Total	74		
a. 8 th week < 1 st week b. 8 th week > 1 st week c. 8 th week = 1 st week				

Table 7: Anxiety rank statistical analysis

Wilcoxon Signed Rank Test	8 th week - 1 st week
Z-based on positive ranks	-1.140
P value	.254

Table 8: Stress: Positive for stress: Average 7/73 (9.6%): Cutoff score 15 & more

1 st week	8 th week
5	9

Table 9: Stress Ranks at first week and eighth week

		N	Mean Rank	Sum of Ranks
8 th week - 1 st week	Negative Ranks	31 ^a	33.08	1025.50
	Positive Ranks	34 ^b	32.93	1119.50
	Ties	8 ^c		
	Total	73		
a. 8 th week < 1 st week b. 8 th week > 1 st week c. 8 th week = 1 st week				

Table 10: Stress ranks statistical analysis

Wilcoxon Signed Rank Test	8 th week - 1 st week
Z-based on negative ranks	-.308
P value	.758

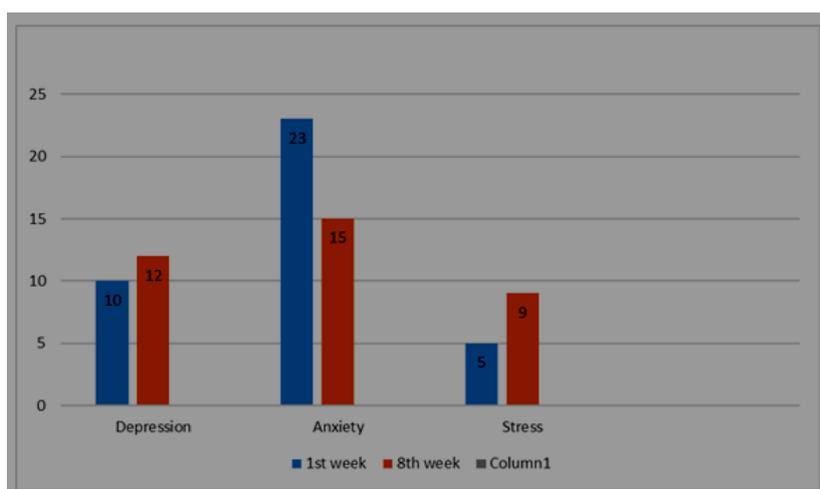


Fig. 1: Depression, anxiety and stress results

DISCUSSION

Significant number of students reported having psychological problem in form of Depression, Anxiety and Stress. Cut of score for stress 15 is probably too high. Score for stress does not co relate as well as that of depression and anxiety. Score does not differ

significantly over 8 week’s period, probably suggestive of stability of the emotional disturbance detected by DASS. Initial and yearly repeated screening of students during medical study is worthwhile. Positive for Depression (15%), Anxiety (26%) and Stress (9.6%) among the students is significantly much higher than

general population [14]. In addition to personal suffering it may cause learning and interpersonal problems. Factors contributing to high level of depression, anxiety and stress need exploration in current set up of self-financed medical college. Early detection and necessary intervention are precious preventive measures. Early screening and intervention are advisable because it will help the students in reducing their stress, anxiety and depression which are in their initial phase and can be managed easily with few sessions of counselling which will boost up their moral and thereby their academic performance will improve. They will be able adjust themselves in a better way with peers and faculty members. In a medical school culture that espouses pushing oneself to the limits of mental and emotional strength and endurance, a culture where self-neglect is normalized out of perceived necessity. Small compromises in self-care accumulate to a degree in which the potential for physical or emotional harm to both patient and medical practitioner is actualized. Stephenson *et al.* [18] have excellent recommendations to reduce stress among medical students: a) Form a study group, b) Maintain a close group of friends, c) Know your limit and set your own goals, d) Maintain social activities outside of medicine, e) Be part of a mentorship program, f) Organize clinical placements, g) Volunteer to run extracurricular events promoting healthcare and support to the community, h) Apply for scholarships, i) Stay healthy, j) Know when to seek help and where to get it.

CONCLUSION

Fresh medical students have significantly high depression, anxiety and stress. Early screening and intervention are advisable.

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