Psychological wellbeing in Students of Kota District

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Abstract

Psychological health, as measured in the present study, is defined as a state of being in which a student is balanced both emotionally and intellectually. The term stress refers to the psychological state which derives from the person's appraisals of the success with which he or she can adjust to the demand of the society environment.[1]

For the purpose of the present study, the (GHQ-12) General Health Questionnaire (GHQ) was chosen as a screening tool for psychological problems faced by secondary school students in Kota, Rajasthan.

A cross sectional quantitative study was conducted between November 2014 to January 2015 in Coaching institutes in urban region of Kota. Self-administered questionnaire were given to the respondents after getting the consent formed filled by them.

Around 50% students were not psychologically morbid. 7.3% students were severely morbid. Rest of the students were moderate morbid. This might be due to various factors other than academics pressure. But this section of students must be monitored regularly as they can switch to severe morbidity.

Analysis the scores of GHQ12 as per sex of the students showed that in sever morbid group more than two third of the students were females. Medical students were either more morbid or at risk of morbidity in comparison to engineering students. Further research needs to be done to study the differences in the academic environments of these fields.

This study was based on results from a self-administered questionnaire, hence reporting bias cannot be totally eliminated. There was geographical coverage since the study was conducted in a single urban area. Confounding factors such as the participants' current emotional state or personality may be present. Similarly, the difference in stress levels at different times, during pre-examination, examination and post examination periods, was not included in this study.

KEYWORD - Psychological morbidity, Medical and Engineering Students, Mental Health, Stress

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Introduction Health is defined as a state of complete physical, mental and social wellbeing, and not merely absence of disease or deformity(1). Psychological health, as

[1]12. IRSSH-485-V5N1 - 12_IRSSH-485-V5N1.161113142.pdf Available at: http://www.irssh.com/yahoo_site_admin/assets/docs/12_IRSSH-485-V5N1.161113142.pdf. Accessed 11/13/2014, 2014

measured in the present study, is defined as a state of being in which a student is balanced both emotionally and intellectually. A psychologically healthy student is capable of thinking clearly, developing socially and learning new skills with ease. However, as students are at a crucial stage of development, they are more prone to experience mental illnesses in the transition from being an adolescent to an adult (Giugliano, 2004). Reports on cases of young adults suffering from mental illness have made the issue a national concern in India. Many epidemiological studies conducted in India on mental and behavioral disorders report varying prevalence rates, ranging from 9.5 to 370 per 1000 population (2) . As per National Sample Survey Organization report 2008, for the age group 15 to 19 years, the rural adolescents have prevalence of mental illness as 91 per 100,000 population while the adolescents in urban region, the mental illness was found around 73 per 100,000 population (3). Therefore, there seems to be a need for research on the psychological health of college students is important if the aim is to identify stress experienced by these students, determine the factors contributing to their stress, and ultimately design a treatment plan that can be used to improve students' quality of life and reduce their risks of experiencing mental illness.

The term stress refers to the psychological state which derives from the person's appraisals of the success with which he or she can adjust to the demand of the society environment.[2] When student start taking education as a challenge, stress bring them the sense of competence and when education is seen as a threat , stress elicit feeling of helplessness and a foreboding sense of loss. It also postulated those students who are under low and high stress learn the least and those under moderate stress learn the most.[3] Psychological problems vary from 2 percent to as high as 50 percent in student population. Common reasons for stress among the students includes greater academic demands, changes in social life, change in family relations, being on your own in new environment and exposure to new people ideas and temptations. Some specific problems of students include fear of failure, time pressure, pressure of academic excellence and tough competition and struggle to establish their identity. Emotional problems faced by these students are feeling inferior to others, worrying too much, not able to think properly, feeling anxious without any apparent reasons and sometimes feel that life is not worth living.

With the exception of few researches and surveys, academic stress has not been explored in much detail. It is also important to know that whether Indian youth is greatly affected by this issue or not. In purview of the problem, mental health professionals in India have identified acute pressure as a stress factor which may lead to mental distress and in some extreme cases it may even lead to suicide attempts. Psychologist even says that children are under pressure to appear for competitive exams. During exams times, when the academic pressure is very high, suicide hotlines are swamped with calls that time, all calls are pertaining to committing suicide due to not achieving good marks or grades as expected by their parents.

[2] 12. IRSSH-485-V5N1 - 12_IRSSH-485-V5N1.161113142.pdf Available at: http://www.irssh.com/yahoo_site_admin/assets/docs/12_IRSSH-485-V5N1.161113142.pdf. Accessed 11/13/2014, 2014

[3] P.L. Broadhurst, Emotionality and the Yerkes-Dodson Law, Journal of Experimental Psychology, 54(5) (1957), 345-352

The General Health Questionnaire (GHQ), which was originally developed by Goldberg, has been widely used in various cultures as a screening tool to determine whether an individual is at risk of developing a psychiatric disorder (Goldberg & Williams, 1988). It is worth mentioning that the GHQ is extensively used by researchers and has been found to be reliable and well-validated (Goldberg et al., 1997). The GHQ was originally designed to be used in adult populations. However, it is noted in the GHQ manual that the scale has been used with adolescents (Goldberg & Williams, 1988). The GHQ comes in four versions, and these include GHQ-60, GHQ-30, GHQ-28 and GHQ-12. The original version of the GHQ contains 60 items and is known for its multi-dimensional aspects. The GHQ-12 is the shortest version and commonly used as a screening tool in a public setting. It is usually regarded as testing only a single dimension of psychological health (Gao et al., 2004). However, some previous research have shown that the GHQ-12 has two (e.g. Picardi, Abeni, &Pasquini, 2001; Werneke, Goldberg, Yalcin, &Ustun, 2000) and three (e.g. Cheung, 2002; Picardi et al., 2001; Werneke et al., 2000) meaningful underlying factors.

Situated on the banks of Chambal, Kota is a dusty and non- descript town of Rajasthan India. But over so many years it has emerged as the country's coaching class capital where student from various different states descend to prepare for engineering and medical entrance exams (like IIT-JEE, AIEEE, PMT). Each top coaching institute of Kota like Allen, Resonance, Bansal classes and Career point has more than 15,000 students and over 500 staff. Many outstation students are said to be under stress that are undergoing coaching for engineering and medical entrance exams in Kota district of Rajasthan India. As a competition to grab seat in best coaching institute Kota is on rise, so is the suicidal tendency.

Literature Review

Various studies and surveys were conducted in India laying emphasis on stress and other psychological morbidity among students appearing for undergraduate level entrance examination. In 2013, Hindustan Times newspaper conducted survey among 5000 students and found 48% students felt that the exams caused pressure while 24% said they felt pressurized to an extent. Survey findings also revealed that student feel in pressure because their identity is linked with their performance in the entrance examination. Most of the students that were part of the survey said that the education system needs a more practical and interactive approach now to overcome these situations.[4]

As per findings of a study conducted in India in 2006, students find it very difficult to cope with both the board examinations and entrance test at the same time. In 2006 only, 5857 students (16 per day) committed suicide across India due to exam stress, while few students ran away from their home or simply refused to appear for exams. Symptoms of exam stress were reported as sleepless nights, loss of appetite, and trouble thoughts. This study emphasized on how stress causes immense effect on nervous system, immune system and cardiovascular system etc. Social polls conducted under the study have

[4]48% college students under pressure from entrance exams, reveals survey - Hindustan Times Available at: http://www.hindustantimes.com/india-news/mumbai/48-college-students-under-pressure-from-entrance-exams-reveals-survey/article1-1123116.aspx. Accessed 11/13/2014, 2014.

demonstrated that student perceives exams as sever torture and as an intellectual and emotional overload.[5]

Under Stanford University, Students Health Needs Assessment was conducted in 1990. It was found that psychological distress is very common in students. 1 in 5 students described themselves as tired without any apparent reason. 1 out of 3 students describes themselves as anxious/tense. 43 percent felt so depressed that it became hard for them to get going and 16 percent felt that life is not worth living (Martinez &Fabino, 1992).[6]
Rao P.N. (1978), in his unpublished MD thesis, administered general health questionnaire (GHQ) on 428 students with in the age group of 13-16 years. The study showed that about 20 percent of students were under neurotic problem, 47 percent with depression, 21 percent with anxiety, 8 with psychogenic headaches and 7 with inability to concentrate and vague aches and pains.[7]

There is a statistical significant association between field of education and stress. A cross sectional study was conducted in dental, medical and engineering colleges students in 2012 to test the association of stress with academic factors. The study confirmed the association and stress was observed in 27.7% female students and 20.4 % in male students. Higher stress level is observed in medical students in comparison to engineering students. [8]

Thackore et al (1971) conducted a longitudinal study on 58 medical students over a time span of 4 years (1966 to 1970). On the basis of results, he concluded that the prevalence rate of psychological morbidity was 1 percent and most of them suffered from depression and anxiety. Wig et al" (1969) found that out of 68 students referred to counseling center, 50 percent reported difficulty in concentration while some had problem of frequent sad moods, getting nervous, headache, inferiority complex and difficulty in memory. [9]
Students are the successors of any country. Countries that want to become great have learned that economic dominance is predicated upon the creation of a system of high quality and stress free education. Education is good not just for the person who becomes educated, but also for everyone around him. Looking into the previous studies and importance of students towards country's economy, there is urgent need to understand the level of stress and its association with other factors among students.

Many studies have examined the relationship between psychological distresses with different factors using GHQ12.

GHQ is used to assess mental health status of the students, which was found to be reliable and

[5] Board and Entrance Exam Stress on Students - Don't Kill yourself Available at: http://www.successcds.net/Articles/Board-Entrance-Exam-Stress.html. Accessed 11/13/2014, 2014
[6] 12. IRSSH-485-V5N1 - 12_IRSSH-485-V5N1.161113142.pdf Available at: http://www.irssh.com/yahoo_site_admin/assets/docs/12_IRSSH-485-V5N1.161113142.pdf. Accessed 11/13/2014, 2014.
[7] 12. IRSSH-485-V5N1 - 12_IRSSH-485-V5N1.161113142.pdf Available at: http://www.irssh.com/yahoo_site_admin/assets/docs/12_IRSSH-485-V5N1.161113142.pdf. Accessed 11/13/2014, 2014.
[8] A Study of Stress among Students of Professional Colleges from an Urban area in India Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3749028/. Accessed 11/13/2014, 2014
[9] 12. IRSSH-485-V5N1 - 12_IRSSH-485-V5N1.161113142.pdf Available at: http://www.irssh.com/yahoo_site_admin/assets/docs/12_IRSSH-485-V5N1.161113142.pdf. Accessed 11/13/2014, 2014.

valid in many countries. It is a screening test used by world health organization (WHO)[10] in many of the studies, GHQ 12 has therefore been taken as a tool for finding stress among students. In one of the study "academic achievement and presence of a negative event in last year were the main factor that were taken into consideration for the study and were present in the GHQ12 model[11]. GHQ-12 is a valid measure for testing a mental well-being and from a complete perspective (positive and negative). Although that this model shows valid in many countries; it has not yet been studied for physically active youth. Findings of our study indicate that GHQ12 has valid scales measuring stress levels.[12]

METHODOLOGY:

For the purpose of the present study, the GHQ-12 was chosen as a screening tool for psychological problems faced by secondary school students in Kota, Rajasthan. The accessible population for the present study was the students of class 11/12th studying in Coaching Institutes, Kota.

Research Questions

1) What is the extent of Psychological morbidity among students?
2) What is the difference between stress level among Medical and Engineering exams preparing students?
3) What is the association of Psychological wellbeing of the students with gender and residence and economic condition?

Study Design: A cross-sectional quantitative study (primary data)
Study Area: Kota District (Urban) of Rajasthan
Study Period: November 2014 to January 2015
Study Setting: Coaching institutes in urban region of Kota
Study Population: Students studying in coaching institute of Kota
Sampling method: Stratified Random sampling was used for this study. There are 132 coaching institutes listed in official website of district administration of Kota. These coaching institutes were divided into 2 strata's - Medical and Engineering. Then using simple random sampling, 5 coaching institutes were picked for each stratum. Then by simple random sampling, 40 students were selected from each institute.
Sample size: 384 ($n= z^2*PQ/ d^2$, Z= 1.96, P=.5, Q= 1-P, d= .05)
Study Criteria
Inclusion criteria: Students who willfully filled the questionnaire and filled the consent form.

Exclusion criteria: Students who were not will full to fill the questionnaire.

Study Tool: Self-administered questionnaire is used for data collection. Standardized questionnaire on General Health Questionnaire - 12 (GHQ) (Goldberg, 1978) is used.

[10] Goldberg DP, Gater R, Sartorius N, Ustun TB, Piccinelli M, GurejeO et al. The validity of two versions of the GHQ in the WHO studyof mental illness in general health care. Psychol Med 1997; 27(1):191–7

[11] sag-38-5-10-0709-14:sag-0 - 5000030291 Available at: http://dergipark.ulakbim.gov.tr/tbtkmedical/article/viewFile/5000030054/5000030291. Accessed 1/2/2015, 2015

[12] Mental Health, Subjective Vitality and Satisfaction with Life for F - 2.pdf Available at: http://www.idosi.org/wjss/4(2)11/2.pdf. Accessed 1/2/2015, 2015.

GHQ 12 is a screening tool which is used to identify the severity of psychological distress which is experienced by an individual. This tool focuses on normal functioning rather on lifelong traits. It only covers patterns or disorders of adjustment that are associated with stress. Each question has four responses from "better than usual" to "much less than usual". For the purpose of this study scoring method of (0-0-1-1) is chosen. This is a better method to help eliminate biases which might result from the answer marked by the respondent who may tend to choose responses 1and 4 or 2 and 3, respectively. Then all items are added up ranging from 0 to 12 and summed.

Apart from that, questions on Gender, Residence (Urban or Rural) and Family Income will be asked.

Data Collection Method:

Permission from the institute administration was taken for the study. At the beginning of each interview, the researcher introduced herself, the study and the organizations were involved. The purpose and content of the study was then explained. Finally, researcher asked for informed consent to proceed with their participation in the study. The researcher explained participants about the confidentiality and anonymity of the study. The interviewer specified that the data was being collected for research purposes only and that participants were free to stop the interview at any time. The study and the tools used received ethical approval. Standard procedures were put in place in the unlikely event that a respondent became distressed during the interview.

Self-administered questionnaire were given to the respondents after getting the consent formed filled by them. Then the questionnaire was collected after 15 minutes with the help of institution staff.

Result and Discussions:

Out of a total 400 students, 372 completed and returned the questionnaires, giving an overall response rate of 93%. One hundred eighty nine (50.8%) of the respondents were males, while 183 (49.2%) were females. The mean age of the study subjects was 17.79 years with a standard deviation of 0.71.The mean age of male students was 17.84 years and for female students, it was 17.73 years.

In the sample, 190 (51.1%) students were aspiring for medical entrance examination and 182 (48.9%) students were aspiring for engineering entrance examination. About half of them were from urban area and remaining were from rural area.

Table 1

Sex of Student * Stream of Student Crosstabulation			
Sex of Student	**Stream of Student**		**Total**
	Medical	Engineering	
Male	93	96	189
Female	97	86	183
Total	**190**	**182**	**372**

On being asked about family income, students responded in integer value but for the ease in analysis, their responses were further classified into different income slabs. The annual family income ranged from Rs.1, 00,000 to Rs.12, 00,000 per year, while mean family income was around Rs. 3.5 lakhs.

Table-2

Category	Frequency	Percent
Upto 2 lakh	108	29.0
2 to 4 lakhs	143	38.4
4 to 6 lakhs	78	21.0
6 to 8 lakhs	26	7.0
Above 8 lakhs	17	4.6
Total	**372**	**100.0**

In order to access the mental health status of the study subjects, GHQ12 was used. It has 12 questions in which

The students evaluated their occurrence on a 4-point response scale. The scale points were described as follow: “less than usual”, “no more than usual”, “rather more than usual”, “much more than usual”. The standard scoring method recommended by Goldberg for the need of case identification is called “GHQ method”. Scores for the first two types of answers are “0” (positive) and for the two others are “1” (negative).

In GHQ scoring of the answer “as always” depends on the consideration: does the positive answer to a question indicates illness (so called negative items of the questionnaire) or health (positive items). Among negative items, “feeling unhappy and depressed”, a respondent gets 1 point for an answer “no more than usual”. Therefore, the scoring of answers for such questions is: 0, 1, 1, 1.

In positive items, such as “been able to concentrate on whatever you’re doing” the reply “same as usual” has a 0 value. The scoring of positive items is then the same as the standard scoring in the GHQ (0, 0, 1, 1). Thus the result of an individual subject will be in range from 0 to 12 points.

Psychological morbidity is divided into three grades. Grade I denotes no morbidity ranges from 0 to 4 point on GHQ12 scale. Grade II denotes less or moderate morbidity ranging from 5 to 8 points on GHQ12 scale. Grade III denotes severe morbidity ranges from 9 to 12 points.

Table No. 3

Grades	Frequency	Percent
Grade 1 (0 to 4)	183	49.2
Grade 2 (5 to 8)	162	43.5

Grade 3 (9 to 12)	27	7.3
Total	372	100.0

This table shows the frequency and percentage of students under various grades of psychological morbidity. Around 50% students were in grade I. They were not psychological morbid. 7.3% students were in grade III which show that they were severely morbid. Rest of the students were moderate morbid. This might be due to various factors other than academics pressure. But this section of students must be monitored regularly as they can switch to severe morbidity.

Table No. 4 Crosstabulation table of grade score and sex

		Grading of Score			
		Grade 1 (0 to 4)	Grade 2 (5 to 8)	Grade 3 (9 to 12)	**Total**
Sex of Student	**Male**	97	83	9	**189**
	Female	86	79	18	**183**
Total		**183**	**162**	**27**	**372**

Analysis the scores of GHQ12 as per sex of the students, it was found that in grade III, more than two third of the students were females. Males were more than females in grade I and grade II. Females were more morbid than males.

Table No. 5, Age of Student * Grading of Score Crosstabulation

			Grading of Score			
			Grade 1 (0 to 4)	Grade 2 (5 to 8)	Grade 3 (9 to 12)	Total
Age of student	17	Count	58	58	7	123
		% within Grading of Score	31.7%	35.8%	25.9%	33.1%
	18	Count	107	80	16	203
		% within Grading of Score	58.5%	49.4%	59.3%	54.6%
	19	Count	17	22	3	42
		% within Grading of Score	9.3%	13.6%	11.1%	11.3%
	20+	Count	1	2	1	4
		% within Grading of Score	.5%	1.2%	3.7%	1.1%
Total		Count	183	162	27	372
		% within Grading of Score	100.0%	100.0%	100.0%	100.0%

Age is an important factor associated with stress and related conditions. Sometimes a student with age more than his or her colleagues, feels more pressure of performance and

thus at more risk of being psychological morbid in comparison to other students. Similar when a student is too young in the class, he or she feels age inferiority with other older students.

In this study, students with age 20 years or more were approximately 25% in grade III. For other age and age groups, the percent of students falling in grade III was around 6-8% only.

In Indian system of education, it is generally seen that a normal student passes his or her senior secondary school by the age of 17-18 years. When a student with age 20 or more study with students of age group 17-18 years, he or she feels inferiority of being not able to perform well when he or she was of age 17-18 years. Being older than others, their social circle also reduced, thus they were not able to share their thoughts and feelings with others. Apart from the effect of their immediate surroundings, they have high pressure from parents and society to perform better in entrance examination as they have taken drop in the education for preparing for entrance examination. After 2 or 3 failure attempts in entrance examination, they felt more stress and anxiety.

Table No . 6Crosstabulation table of grade score and Place of residence

			Grading of Score			
			Grade 1 (0 to 4)	Grade 2 (5 to 8)	Grade 3 (9 to 12)	Total
Place of residence	Urban	Count	97	79	18	194
		% within Grading of Score	53.0%	48.8%	66.7%	52.2%
	Rural	Count	86	83	9	178
		% within Grading of Score	47.0%	51.2%	33.3%	47.8%
Total		Count	183	162	27	372
		% within Grading of Score	100.0%	100.0%	100.0%	100.0%

The place of residence was asked from students as urban or rural. It was discussed in various studies that students from rural areas found difficulty in coping with students of urban area. While some studies revealed that students from urban areas were more prone to stress due to their pampered upbringing.

From the table no. 6 , in grade III, 66.7% were the students from urban areas while only 33.3% students were from rural areas. In grade II, percentages of students from rural and urban areas were similar.

Table No. 7 Grading of Score Crosstabulation with annual family income

Annual Family Income (Rs)		Grading of Score			Total
		Grade 1 (0 to 4)	Grade 2 (5 to 8)	Grade 3 (9 to 12)	
Upto 2 lakh	Count	57	42	9	108

	% within Grading of Score	31.1%	25.9%	33.3%	29.0%
2 to 4 lakhs	Count	69	66	8	143
	% within Grading of Score	37.7%	40.7%	29.6%	38.4%
4 to 6 lakhs	Count	39	32	7	78
	% within Grading of Score	21.3%	19.8%	25.9%	21.0%
Above 6 lakhs	Count	18	22	3	43
	% within Grading of Score	9.8%	13.6%	11.1%	7.0%
	Total	183	162	27	372
	% within Grading of Score	100.0%	100.0%	100.0%	100.0%

In table no 7, in grade III, one third of the students were having family income less than two lakhs rupees whereas in case of family income more than 6 lakhs, only one tenth students were severely morbid. Although no test of significance was performed between family income and GHQ12 score, still it can be deduced that family income plays an important role in determining the mental health of the students.

Table No. 8, Score Grade Crosstabulation with stream of student

Stream of Student			Grading of Score			Total
			Grade 1 (0 to 4)	Grade 2 (5 to 8)	Grade 3 (9 to 12)	
	Medical	Count	83	89	18	190
		% within Grading of Score	45.4%	54.9%	66.7%	51.1%
	Engineering	Count	100	73	9	182
		% within Grading of Score	54.6%	45.1%	33.3%	48.9%
Total		Count	183	162	27	372
		% within Grading of Score	100.0%	100.0%	100.0%	100.0%

Among 190 medical students, more than 55% students were morbid either moderately or severely. While in case of 182 engineering students, 45% students were morbid. In grade III, about 67% students were from medical stream and only 33.3% students were from engineering stream. Similar results could be seen in grade II. In the sample covered, medical students were either more morbid or at risk of morbidity in comparison to engineering students.

Table No. 9, Score grade Crosstabulation : stream of male students

Stream of Student			Grading of Score			Total
			Grade 1 (0 to 4)	Grade 2 (5 to 8)	Grade 3 (9 to 12)	
	Medical	Count	44	43	6	93
		% within Grading of Score	45.4%	51.8%	66.7%	49.2%
	Engineering	Count	53	40	3	96
		% within Grading of Score	54.6%	48.2%	33.3%	50.8%
Total		Count	97	83	9	189
		% within Grading of Score	100.0%	100.0%	100.0%	100.0%

In order to have more sex and stream specific status of mental health, sex wise cross tabulation was performed between grades of GHQ12 score and stream of the students. Among male students, medical stream students were more severe morbid (66.7%) than those who were preparing for engineering entrance examination.Similarly in grade II, medical stream students were more at risk.

Table No. 10, Score grade Crosstabulation: stream of female students

Stream of Student			Grading of Score			Total
			Grade 1 (0 to 4)	Grade 2 (5 to 8)	Grade 3 (9 to 12)	
	Medical	Count	39	46	12	97
		% within Grading of Score	45.3%	58.2%	66.7%	53.0%
	Engineering	Count	47	33	6	86
		% within Grading of Score	54.7%	41.8%	33.3%	47.0%
Total		Count	86	79	18	183
		% within Grading of Score	100.0%	100.0%	100.0%	100.0%

In case of females, students those who were studying in medical stream (66.7%) were severely morbid while only 33.3% students from engineering stream were severely morbid. In grade II, 58.2% moderately morbid students were from medical stream and in grade I, about 55% students who were not psychological morbid were from engineering stream.

Deducing from the above analyses, females were more morbid or at risk than male students. Looking at the figures as per stream, students preparing for medical entrance examination were more morbid than students aspiring for engineering entrance examination.

Table No. 11, Sex of Medical Student * Grading of Score Crosstabulation

			Grading of Score			
			Grade 1 (0 to 4)	Grade 2 (5 to 8)	Grade 3 (9 to 12)	Total
Sex of Student	Male	Count	44	43	6	93
		% within Sex of Student	47.3%	46.2%	6.5%	100.0%
	Female	Count	39	46	12	97
		% within Sex of Student	40.2%	47.4%	12.4%	100.0%
Total		Count	83	89	18	190

Among medical students, the females (12.4%) were more in grade III than males (6.5%). In grade II, the percent of males and females was almost equal showing no difference. While in grade I which represents no stress or morbidity, the number of males (47.3%) was more than females (40%).

Table No. 12, Sex of Engineering Student * Grading of Score Crosstabulation

			Grading of Score			
			Grade 1 (0 to 4)	Grade 2 (5 to 8)	Grade 3 (9 to 12)	Total
Sex of Student	Male	Count	53	40	3	96
		% within Sex of Student	55.2%	41.7%	3.1%	100.0%
	Female	Count	47	33	6	86
		% within Sex of Student	54.7%	38.4%	7.0%	100.0%
Total		Count	100	73	9	182

55.2% males aspiring for engineering examination were in grade I and 54.7% females in grade I. In grade III, only 3.1% males were present while 7% females were severely morbid.

Table No. 13, Stream of Student from urban area * Grading of Score Crosstabulation

			Grading of Score			
			Grade 1 (0 to 4)	Grade 2 (5 to 8)	Grade 3 (9 to 12)	Total
Stream of Student	Medical	Count	45	42	12	99
		% within Stream of Student	45.5%	42.4%	12.1%	100.0%
	Engineering	Count	52	37	6	95
		% within Stream of Student	54.7%	38.9%	6.3%	100.0%
Total		Count	97	79	18	194

Mentally healthy students in medical stream were 45.5% and in engineering stream were 54.7%. Taking place of residence as constant (only Urban students), the more students from medical stream (42.4%) were at risk than students from engineering stream (38.9%). In grade III, nearby twice medical students were severely morbid than engineering students.

Table No. 14, Stream of Rural Student * Grading of Score Crosstabulation

			Grading of Score			Total
			Grade 1 (0 to 4)	Grade 2 (5 to 8)	Grade 3 (9 to 12)	
Stream of Student	Medical	Count	38	47	6	91
		% within Stream of Student	41.8%	51.6%	6.6%	100.0%
	Engineering	Count	48	36	3	87
		% within Stream of Student	55.2%	41.4%	3.4%	100.0%
Total		Count	86	83	9	178

In the medical stream, half of the students from rural place of residence (51.6%) were at risk, 41.8% were mentally healthy while 6.6% were psychologically morbid. In the engineering stream, 55% students were healthy, 41% were at risk and remaining students were in grade III.

Conclusion and Recommendation:

Students from both the fields of education (medical and engineering) are exposed to stress; however it seems that the students aspiring from engineering entrance examination are less prone to the development of stress compared to students aspiring for medical entrance examination. Further research needs to be done to study the differences in the academic environments of these fields, the role of number of medical and engineering colleges in India and impact of these factors on the development of stress. Academic, environmental, social and health problems all play an important role in the development of stress.

Development of more student-friendly environments and regular periodic extracurricular activities with universal participation can prove to be useful stress-busters. Similarly, students having their permanent place of residence in urban areas were observed to be prone to develop stress; thus a periodic review should be conducted with their parents and the issues of the students should be promptly addressed.

Health is a major concern of students, and therefore the promotion of healthy dietary and lifestyle habits should be encouraged. Additionally teachers, parents and even students themselves should be aware that undue expectations about academic achievement can lead to stress.

Finally, regular study habits and adequate preparation can help students to avoid stress.

Limitations:

There are some limitations to this study. This study was based on results from a self-administered questionnaire, hence reporting bias cannot be totally eliminated. There was geographical coverage since the study was conducted in a single urban area. Confounding factors such as the participants' current emotional state or personality may be present. Similarly, the difference in stress levels at different times, during pre-examination, examination and post examination periods, was not included in this study.

References

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