EXAMS RELATED STRESS IN MEDICAL STUDENTS: A CROSS SECTIONAL STUDY

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Abstract - The study was conducted to detect level of stress due to exams in medical students of Kasturba Medical College Mangalore, Manipal Academy of Higher Education (MAHE), Karnataka, India.Methodology: This is a cross-sectional observational research work done to measure the level of stress by using a standard questionnaire. 95 medical students participated in the study. Results: Different parameters were used to denote stress levels such as energy level, enthusiasm level, depression level, efforts and performance level, confidence level. The values which were obtained were divided depending on 50th percentile of the scores to decide the person having stress or no stress. 41.1% of students were unstressed and 58.9% were stressed. Among unstressed 80% were freshers and 20% were droppers. Discussion: The current study helps to detect stress in medical students using different criteria. For example, the stressed students tend to perform less because of inability to put much effort. They lose their interest as seen in the enthusiasm scale. Though less number of students are stressed as per these scales, still it amounts to significance.

Key words - Stress, performance, exam, freshers, droppers etc.

I. INTRODUCTION

Stress is an extremely adaptive phenomenon in human, contributing to anyone's survival, activities and performance. According to Danzae Pace Stress is the trash of modern life we all generate it but if we don't dispose of it properly it will pile up and overtake our life. Stress is the wear and tear our bodies experience as we adjust to our continually changing environment. It has physical and emotional effects on us and can create positive or negative influence on us[1]. As a positive influence, stress can help compel us to action. Exams also have certain uses. Results influence future professional career, motivates self-dependency, self-esteem and social status. As a negative influence, it can result in feelings of distrust, rejection, anger, and depression, which in turn can lead to health problems such as high blood pressure, heart strokes etc.[2,3]. Psychology, on the other hand, has followed the transactional model which emphasizes intervening psychological processes. The interpretation of what is stressful and the reaction to its source will be different for each of them [4-6]. The psychological well-being of university students in other courses of health care, such as nursing [7,8] and dentistry[9,10], was also investigated. Among those studies, the results were similar in terms of the signs of psychic distress exhibited by students when facing difficulties related to performance in academic activities. . There is attitude among students of turning a blind eye toward existing stress is a harbinger of serious mental and psychosocial problemsDiscussion: Stress can be defined as 'any challenge to homoeostasis', or to the body's internal sense of balance. It can manifest itself either as eustress or as distress. Stress as an entity is universally present among students of all streams, irrespective of age, sex, and other variables. Combination of boards and entrance exams is what many students find difficult. In 2006, 5,857 students or in other words 16 students per day committed suicide across India due to exam stress. Students perceive exams as a duel of questions and answers, severe torture or intellectual and emotional overload. Most studies conducted have focused on medical students and courses, considering the vicissitudes of the course itself, which expose students to sources of tension, from the admission process to graduation. Such stress factors include coming into contact with death and with innumerable pathological processes, performing the first physical exam on a patient, fear of acquiring diseases and feelings of inadequacy when confronting certain diseases. All of this may lead the students to engage psychological defense mechanisms such as dissociation or isolation of the affect[11]. Roberts et. al. showed that approximately one-fourth of medical students in the USA present symptoms of mental distress

II. DETAILS EXPERIMENTAL

2.1. Materials and Procedures

A cross-sectional questionnaire-based study of first year medical students (that includes freshers and droppers) of Kasturba Medical College, Mangalore was conducted. Stress was measured using stress measurement scale having different parameters like effort enthusiasm, performance, confidence etc. Informed consent was taken from all the students following approval from the college ethical committee.

In this questionnaire options are numbered 1-4 and then a cumulative score is calculated for each one. 4 is the maximum and 1 being the minimum. The average of the total score calculated. The persons having score above average are unstressed and below

average are stressed. In this model, stress is considered only to occur when the person perceives an external demand as extending his or her capability to deal with it.

Data analysis is done using SPSS16.0 and Microsoft Excel Worksheet.

The Questionnaire included the questions about subject's particulars like sex, age, academic background, Family related professions, Inspiration for choosing this career, Social circle- peer pressure, hard work done to achieve your aim, any illegitimate feelings leading to some serious consequences, views about NEET (National Eligibility cum Entrance Test).Subsequently the data will be compiled and it will categorize the three categories of Medical students with/without stressed out condition. Data analysis is done by using $\chi 2$ test with OR(Odds Ratio) and CI(Confidence Interval). A statistical package SPSS Version 17.0 will be used to do the analysis.. $P \leq 0.05$ was considered as significant.

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Table1:Efforts and performance scale: percentage of stressed and unstressed students

	Frequency	Percent
	12	12.6
	83	87.4
Total	95	100.0

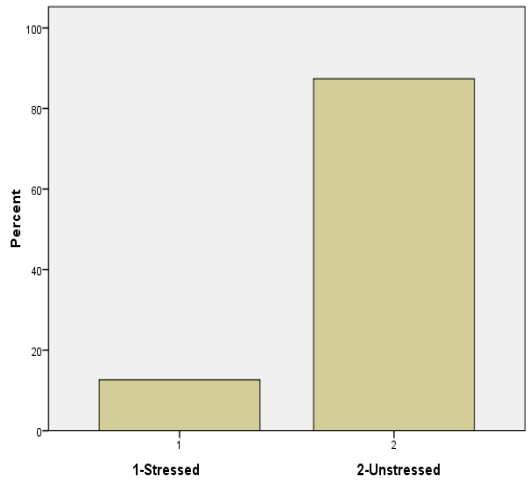


Fig.-1

Table 2: Enthusiasm: percentage of stressed and unstressed students

	Frequency	Percent
	9	9.5
	86	90.5
Total	95	100.0

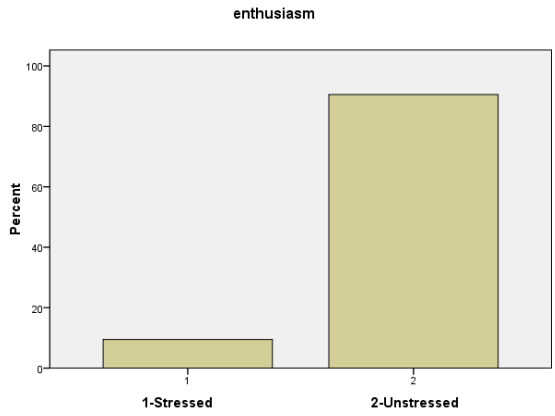


Fig.-2

Table 3:Confidence: percentage of stressed and unstressed students

	Frequency	Percent
	57	60.0
	38	40.0
Total	95	100.0

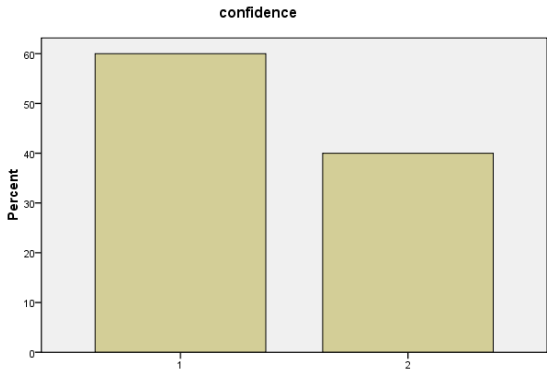


Fig.-3

Table-4Energy: percentage of stressed and unstressed students

	Frequency	Percent
	84	88.4
	11	11.6
Total	95	100.0

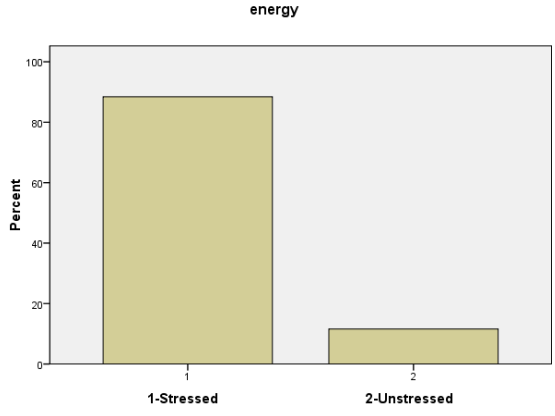


Fig.-4

Table-5 Depression: percentage of stressed and unstressed students

		Frequency	Percent
		33	34.7
		62	65.3
	Total	95	100.0

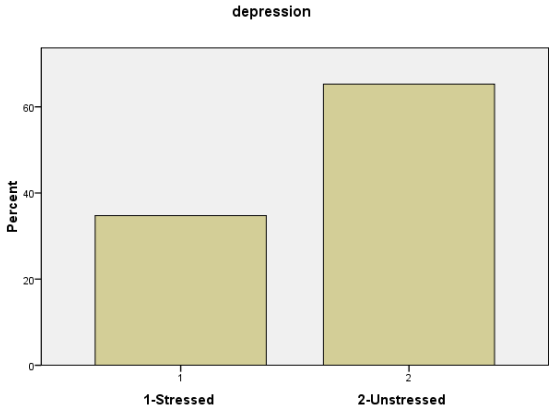


Fig.-5

III. RESULTS AND DISCUSSION

3.1. Stress can be defined as 'any challenge to homoeostasis', or to the body's internal sense of balance. It can manifest itself either as eustress or as distress. Stress as an entity is universally present among students of all streams, irrespective of age, sex, and other variables. Combination of boards and entrance exams is what many students find difficult. In 2006, 5,857 students or in other words 16 students per day committed suicide across India due to exam stress. Students perceive exams as a duel of questions and answers, severe torture or intellectual and emotional overload. Most studies conducted have focused on medical students and courses, considering the vicissitudes of the course itself, which expose students to sources of tension, from the admission process to graduation. Such stress factors include coming into contact with death and with innumerable pathological processes, performing the first physical exam on a patient, fear of acquiring diseases and feelings of inadequacy when confronting certain diseases. All of this may lead the students to engage psychological defense mechanisms such as dissociation or isolation of the affect[11]. Roberts et. al. showed that approximately one-fourth of medical students in the USA present symptoms of mental distress

In a study conducted in nine American medical schools, the authors found that approximately 90% of students reported requiring medical attention due to various health problems, and 46% presented at least one of the psychiatric symptoms investigated (stress, fatigue, anxiety, depression, headache and eating disorders) during the course. The authors found that mental distress was not statistically associated with gender, social status or place of residence and added that this prevalence may be considered high, especially when compared to the 19% found among students at the Federal University of Pelotas School of Medicine. Minor psychiatric disorders, also known as common mental disorders (CMDs), are commonly found in this population and affect the performance of daily activities. The CMD symptoms include insomnia, fatigue, irritability, forgetfulness and difficulty in concentrating, as well as somatic complaints, but do not encompass psychotic disorders, chemical dependence or personality disorders. Students in the health-profession programmes are not only required to adjust to the challenges of the academic environment but also usually lack time for recreation. Stress among health-profession students has been reported, in earlier studies, to be associated with psychological morbidity[12]In this study, there has been an attempt made to find out among the first year students studying

MBBS who are stressed but aren't aware of various ill effects of stress.

Only 41% of the total number of subjects is not stressed. The rest 59% are. Among these 41%, 80% are fresher and 20% are droppers. Mild form of stress during examination can motivate and energise a person. However if stress level is too high, it may cause decrease in examination performance. MBBS students are at more stress as they are appearing for a professional course examination for the first time in their life, alongwith a lot of expectations. In my Study, the questionnaire was conducted 1 month before the 1st year final exams. Similarly, there was another study conducted to evaluate 1st MBBS medical students by assessing anxiety and sympathetic activity using Taylor manifest anxiety scale questionnaire. In it, the study was conducted twice, once , one month before the exams and the second one, one hour before the exams[13]. Then there were different scales made, with different questions from this questionnaire categorised into them. The scales made are :- (i)Efforts and Performance scale, (ii)Enthusiasm scale, (iii)Confidence scale, (iv)Energy scale and (v) Depression and stress scale. As per these scales, different levels of the respective factors are graphically represented against the number of stressed and unstressed students. Here it has been tried to find out the ill effects of stress. In the study includes people from urban and urban and rural area, but in the current study, people from all the areas are all together taken as they are same college and giving the same university examinations. In another similar study, stress was analysed on basis of cortisol levels in plasma. But in the current study, stress is indirectly assessed on basis of the psychological and physical

effects (such as enthusiasm and energy), produced resulting from varied levels of cortisol[14] .

In the current study, the confidence level, energy level etc. are considered as the main parameters for measuring stress. But in a study , among the academics related stress, frequency of examination, time management and the workload were used as parameters[15]. Among the psychosocial stress factors, the main parameters identified were worries regarding the future, high parental expectation and lack of recreation. There were no statistically significant differences between genders and between students in different programmes and/or years[16].

CONCLUSIONS

The study was conducted to find out the percentage of stressed and unstressed students among 1st year MBBS students and the percentage of droppers and freshers among unstressed percentage. The result is significant as it comes as around 41.1% are unstressed and 58.9% are stressed. In unstressed percentage, 80% are freshers and 20% are droppers. There was limited coverage, since study was conducted in just one college, and with first year students only. Compounding factors such as participants' current emotional state or personality may be present. Similarly, the difference in stress levels at pre-examination, examination and post examination periods were not considered in the study. However, different ill effects of stress are observed in the form of common mental disorders (CMDs) and different opinions about NEET are learnt.

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