VOLUME-6 | ISSUE-4 | APRIL - 2017 • ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 78.46

COMPARATIVE STUDY AND ANALYSIS OF PSYCHOLOGICAL STRESS AMONG SECOND YEAR MEDICAL STUDENTS OF DIFFERENT ACADEMIC YEARS

Education

KEYWORDS: Psychological stress, Medical students, MSSQ scale.

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ABSTRACT

Medical students are under academic stress. In this study we tried to identify and assess the prevalence, sources and severity of stress among undergraduate medical students during medical curriculum. We also studied the variation of stress level among medical students of different academic years by MSSQ scale. We found the various degrees of stress and its effects on their academics, psychology, behaviour and lifestyle. We conclude that efforts of teachers, parents and even students themselves can do to minimize stress and enhance potential in academic, behavioral and social well-being.

INTRODUCTION:

In recent years, most of the people especially the ones who are living an urban life is suffering from stress and related problems, and we, who are there to treat them are no exception to this scenario. Even the doctors, the medical students are under stress since academic years and this may affect their learning and academic performance. The term stress was first coined by the endocrinologist Hans Selye[1]. Stress refers to the consequence of the failure of an organism – human or other animal - to respond adequately to mental, emotional or physical demands whether actual or imagined[2] or it is any factor that threatens the health of the body or has adverse effects of its functioning, such as injury, disease, overwork, or worry.

The environment in medical academia is quiet competitive and stressful compare to other professional courses.[3-5] During professional course instead of being that of cooperative learning and focusing on gaining knowledge the students are more concerned about their marks or ranks in the exams. This has definitely changed the way and approach towards the medical curriculum .The academic demands of medical education are placed on students at time of their life when they themselves are involved in issues regarding lifestyle and carriers. Various factors are observed that are responsible for this condition like academic demands, exams, competition, work load etc. Recently, even the pressure of clinical training has been reported to play an important role in developing stress especially among those who are new to clinics.

However, such studies are lacking in our medical school. Therefore, we have undertaken this study to identify and assess the prevalence; sources and severity of stress among undergraduate medical students during medical curriculum. This study is very useful to correlate the factors responsible for stress and effects of this stress on their academics, psychology, behaviour and lifestyle. This study had given valuable information regarding what role the teachers, parents and students themselves can play to reduce stress and enhance the potential of the students to reach their maximum academic, behavioral and social well being.

MATERIAL AND METHODS:

This is questionnaire based institutional study conducted in all second year MBBS students of different academic years or terms from D. Y. Patil Medical College Kolhapur. All second year MBBS students enrolled for professional course and willing to participate were selected voluntarily and randomly.

The study was conducted in the department of pharmacology D.Y. Patil Medical College, Kolhapur. The simplest test to asses stress was **questionnaire method.** The students also feel comfortable with this simple questionnaire method instead of cumbersome tests like checking their vitals at different intervals. So for this study MSSQ (Medical Student Stress Questionnaire) was found to be the best method to obtain maximum information, in shortest time and with not much effort.

Procedure & instrument: - MSSQ is a validated instrument to identify stressors among medical students. Our scale comprises of 30 stations/questions (5 questions for each group)which are grouped into six domains or stressor groups i.e. Academic Related Stressors (ARS), Intrapersonal and Interpersonal Related Stressors (IRS), Teaching and Learning Related Stressors (TLRS), Social Related Stressors (SRS), Drive and Desire Related Stressors (DRS), Group Activities Related Stressors (GARS).It is a self reporting questionnaire and each item represents a particular stressor. The items are rated under 5 categories i.e.0, 1, 2, 3 and 4 to indicate intensity of stress

Data collection:-Students were explained regarding the study and a written consent was taken from each student. Questionnaire was distributed among the students and they were instructed to respond to each item by marking any one number from 0 to 4. The time limit was 15 minutes to fill the MSSQ and then questionnaire was collected from the students. Those returned questionnaires were analyzed and students having any chronic disease or psychiatric disease were excluded from the study thereafter 200 students were included in this study. Out of these only 194 students completed and returned the questionarre.

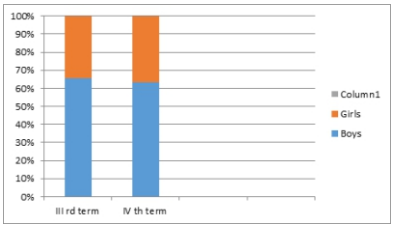
STATISTICAL ANALYSIS:

TEST OF SIGNIFICANCE (STATISTICAL TEST) used is ANOVA (Analysis of variance) to compare all the four groups simultaneously in terms of their means). ANOVA is a generalization of unpaired "t" test which is used for comparing two independent groups)

OBSERVATIONS AND RESULTS:

In our study total 194 students with gender variation as 69 girls and 125 boys responded. Graph I shows total 76 students from IIIrd term (65.78% boys and 34.22 % girls) whereas from 118 students of Vth term (63.55% boys and 36.45 % girls) participated in study.

Graph I - Distribution of respondents by Sex a nd Term



In table I results are based on MSSQ scale. In that table under domain I of Academic related stress, in all five stations the p value was very highly significantly increased. There was no significant increase in

domain II of Intrapersonal and Interpersonal related stress, Domain IV of Teaching and Learning related stress and and Domain VI of Social related stress. At Domain III of Group activities related stress, statistically significant increase was observed whereas in Domain V of Drive and Desire related stress statistically significant increase was observed at few stations.

Table I : Distribution of stress according to Domain and Stations

Sr. No.	Domain	station	I	II	III	IV	V
1	Academic related stress	F value	6.56	4.11	9.63	7.71	3.96
		P value	0.000***	0.007**	0.000***	0.000***	0.009**
2	Intrapersonal and interpersonal related stress	F value	1.51	0.78	1.43	1.60	1.23
		P value	0.215	0.505	0.234	0.190	0.271
3	Group activities related stress	F value	1.09	2.67	2.67	3.83	5.58
		P value	0.353	0.049*	0.049*	0.011*	0.001***
4	Teaching and learning related stress	F value	0.83	0.49	0.43	0.33	1.30
		P value	0.479	0.692	0.734	0.803	0.275
5	Drive and desire related stress	F value	1.51	0.73	0.92	3.40	4.05
		P value	0.213	0.532	0.435	0.019*	0.008**
6	Social related stress	F value	3.75	3.50	0.35	1.36	0.31
		P value	0.012**	0.017*	0.793	0.257	0.819

P < 0.5 = Significant *, P < 0.05= highly significant**, P<0.005= very highly significant***

DISCUSSION:

As revealed that Medical education renders significant amount of stress to the students,[6-11] in our study also medical students exhibited significant stress. Medical students go through not only the stress imposed by medical education but also routine everyday life stressor which may explain the level of severe stress noted among medical students. It was found in our study that gender is not associated with stress because girls participated equally and shown similar results.

Based on MSSQ scale, among the six stressor domains, academic related stress (ARS) was the leading cause of stress on students. Based on MSSQ scale under domain I of Academic related stress, the in all five stations the p value was very highly significantly increased. There was no significant increase in domain II of Intrapersonal and Interpersonal related stress, Domain IV of Teaching and Learning related stress and Domain VI of Social related stress. At Domain III of Group activities related stress, statistically significant increase was observed whereas in Domain V of Drive and Desire related stress statistically significant increase was observed at few stations. Leta M. et al[12] cocluded in the study that the current prevalence of stress was 52.4% and the main source of stress among medical students was academic related. Vivek et al[13] observed that students of medical field having more academic stress as compared to students from other educational fields. Similar findings stated by Al-Dabal et al[14] in their study. Abdulghani et al[15] in their study found that stress among medical students increases as per academic year. Habibah et al[16] explained that moderate stress of medical students were from student's academic course. Priti S. et al[17] in the study elaborated mild to moderate stress among medical student and the major factors responsible are increased exam load, vast syllabus, not getting expected marks and less time for learning and revision.

To relieve the Academic stress encourage the students to interact between with faculties. The proper guidance and counseling by faculties may help to improve the condition. This will be helpful to detect and address the early signs of stress. To minimize teaching and learning related stress, keep flexibility to curriculum, offer variety of options and then add elective choice.

Learning through projects, exhibitions, quiz, Seminar enhance self directed learning; critical thinking and research abilities as well as decrease intra-personal stress by boosting confidence.[18] It will be helpful to improve group related stress as well as interpersonal stress. Recreation facilities should be provided within the campus for the students as it is proved that inadequate social activity and impaired psychological health are interlinked and also that leisure activities can reduce stress among students.[4, 19] Relaxing exercises, yoga and meditation should be incorporated in curriculum as it will give preventive as well as therapeutic benefits for long term.

COCLUSION:

This study has found that majority of medical students experience stress. Both academic and emotional factors are responsible for this stress. Teachers, parents and students can work together to reduce stress and enhance the potential of the students to reach their maximum academic, behavioral and social well being.

ACKNOWLEDGEMENTS:

Authors acknowledge the immense help received from the Dr. Gandham sir, Professor of Preventive and Social Medicine for their statistical guidance. We also acknowledge the help received from scholars whose articles are cited and included in references of this manuscript. The authors are also grateful to authors / editors / publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

SOURCES OF FUNDING: None

CONFLICT OF INTREST: None

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