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Research Article

STRESS SYMPTOMS, STRESSORS AND COPING STRATEGIES IN FIRST YEAR SOUTH INDIAN MEDICAL STUDENTS

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Abstract: Everyone suffers from one or other form stress. But how does our medical student fare in this aspect when they enter this vast, ever expanding and demanding field of medicine. This is our small step to look from eyes of our student. The aim of this study was to enumerate the stress symptoms experienced, followed by evaluating the causes of stress and coping strategies in south Indian medical students. A cross-sectional study was performed on first year medical students at Melmaruvathur Adhiparasakthi Institute of Medical Sciences, Melmaruvathur, Tamilnadu. A total of 141 students were participating in the study; semi structured questionnaire was designed, and they have to grade them in order of which they experienced first. One-way ANOVA for symptoms of stress, causes and coping strategies and Independent Samples Test- Levene's Test for Equality of Variances was used to find out the difference between hostilities and days scholars. Symptom of Fatigue/weakness is more in boys than the girls <0.018; home sickness was more in girls than boys<0.002, the coping strategies like taking rest, involving in sports and cultural programs; self-isolation was significantly more in boys than girls. Hostilities are having more low moods compare to days scholars <0.025, coping strategy is by listening to music<0.01. Medical students will be having different types of causes for their stress, so medical faculties need to be aware of these problems and identify and deal with them as soon as possible.

Keywords: Medical Students, Stressor, Coping Strategies, Medical Faculty

INTRODUCTION

Stress can be defined as "a state of mental or emotional strain or suspense" and also as "a number of normal reactions of the body (mental, emotional, and physiological) designed for self-preservation".[1] Despite its diffuse perception, most of the well-known definitions emphasize stress as "any factor that threatens the health of an individual or has an adverse effect on the functioning of the body". [2] Medicine is an emotionally demanding training and therefore a career in medical education can sometimes be stressful. [3] Stress may be due to exhausting working hours, striving for earning high grades, peer pressure etc. [4] But other possible sources of stress may include enormous syllabus to be covered in a limited period, understanding of new concepts, lack of proper guidance's, thought of appearing/fail in exams, social stress, relationship with peer groups, hostel friends, senior teachers, displacement from home, the expectation of parents, peer pressure, inadequate hostel facility etc. [5] Preventive intervention with medical students in order to reduce the stress and improve their lifestyle is very important part in achieving an improved level of health. [6] Steps should be evolved to prevent stress. In view of the potential long-term benefits of managing stress in a more effective way, it may be important for students to develop such coping skills early in their medical career. Counseling should be started at an appropriate stage integrated with the medical curriculum and extracurricular activities, yoga etc. It may not be possible to eliminate the stress in students, but can be reduced with stress intervention programs. Therefore increased awareness about the stress, its consequences and stress managing modalities early in the medical career is very important. [5] The present study was aimed to see the most common stress symptoms, causes of stress and the coping strategies in medical students by asking the questionnaires.

MATERIALS AND METHODS

A cross sectional study was carried out in the first year medical students of our institute. A total of 141 students participated. Semi structured questionnaire [7] was designed as a tool for data collection. Data collection took 1 week. The detailed meaning of the each questionnaire and options were explained to all the students, and were instructed to mark the different types of symptoms, causes of symptoms and coping strategies, based on their order of most common experience to least common. There were 8 options for the different types of symptoms, 5 options for causes of symptoms and 7 options for

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coping strategies. For example if they mark grade as 1 that was considered as the first most commonly experiencing symptom or cause of symptom or coping strategy.

Statistical analysis

One-way ANOVA for symptoms of stress, causes and coping strategies and Independent Samples Test- Levene's Test for Equality of Variances was used to find out the difference between hostilities and day scholars.

RESULTS

Table 1: One way ANOVA for Symptoms of stress for boys and girls group

Symptoms	Group	Sum of Squares	Df	Mean Square	F	Sig.
Low moods	Between Groups	9.995	1	9.995	1.725	.191
	Within Groups	805.239	139	5.793		
	Total	815.234	140			
Inability to concentrate	Between Groups	.002	1	.002	.000	.984
	Within Groups	667.246	139	4.800		
	Total	667.248	140			
Short temper	Between Groups	.002	1	.002	.000	.989
	Within Groups	1058.566	139	7.616		
	Total	1058.567	140			
Change in sleep pattern	Between Groups	1.665	1	1.665	.342	.560
	Within Groups	677.072	139	4.871		
	Total	678.738	140			
Loneliness	Between Groups	2.245	1	2.245	.309	.579
	Within Groups	1009.713	139	7.264		
	Total	1011.957	140			
Fatigue / weakness	Between Groups	35.490	1	35.490	5.708	.018*
	Within Groups	864.312	139	6.218		
	Total	899.801	140			
Difficulty in making decisions	Between Groups	.017	1	.017	.004	.951
	Within Groups	606.551	139	4.364		
	Total	606.567	140			
Difficulty in communicating with people	Between Groups	.686	1	.686	.099	.754
	Within Groups	965.527	139	6.946		
	Total	966.213	140			

*Fatigue/weakness is more in boys than the girls <0.018

Table 2: One way ANOVA for reasons of stress

Stressor	Group	Sum of Squares	Df	Mean Square	F	Sig.
Exams	Between Groups	.018	1	.018	.011	.915
	Within Groups	213.146	139	1.533		
	Total	213.163	140			
Academics	Between Groups	.048	1	.048	.035	.853
	Within Groups	192.392	139	1.384		
	Total	192.440	140			
Relationship problems	Between Groups	2.409	1	2.409	.788	.376
	Within Groups	424.754	139	3.056		
	Total	427.163	140			
Family problems	Between Groups	.106	1	.106	.027	.869
	Within Groups	545.638	139	3.925		
	Total	545.745	140			
Home sickness	Between Groups	27.839	1	27.839	9.696	.002*
	Within Groups	399.111	139	2.871		
	Total	426.950	140			

*home sickness more in girls than boys<0.002

Table 3: One way ANOVA for coping strategies

Coping strategy	Group	Sum of Squares	Df	Mean Square	F	Sig.
Spending time with friends	Between Groups	.009	1	.009	.004	.952
	Within Groups	332.814	139	2.394		
	Total	332.823	140			
By sleep/rest	Between Groups	53.103	1	53.103	27.527	.000*
	Within Groups	268.146	139	1.929		
	Total	321.248	140			
Music	Between Groups	4.488	1	4.488	2.987	.086
	Within Groups	208.832	139	1.502		
	Total	213.319	140			
Sports	Between Groups	26.679	1	26.679	5.551	.020†
	Within Groups	668.059	139	4.806		
	Total	694.738	140			
Self-isolation	Between Groups	65.333	1	65.333	14.446	.000‡
	Within Groups	628.638	139	4.523		
	Total	693.972	140			
Studying	Between Groups	18.348	1	18.348	3.570	.061
	Within Groups	714.305	139	5.139		
	Total	732.652	140			
College cultural Participation	Between Groups	30.194	1	30.194	4.415	.037§
	Within Groups	950.614	139	6.839		
	Total	980.809	140			

*By sleep/rest more in boys than the girls<0.000, †Sports more in boys than the girls<0.02
‡Self-isolation more in boys than the girls<0.000, §College cultural participation more in boys than the girls<0.03

Table 4: Independent Samples Test- Levene's Test for Equality of Variances

Hosteller Vs Day scholars	Levene's Test for Equality of Variances		95% Confidence Interval of the Difference	
	F	Sig.	Lower	Upper
Low moods	2.384	.025*	-.873	1.826
Listening to music	6.813	.010†	-.341	1.039

*Hostilities are having more low moods compare to day scholars <0.025, †coping strategy is by listening to music<0.010

DISCUSSION

College students especially the fresher's will be under more stress as they have to adjust to the new environment and also staying away from home. The amount of stress experienced will be different from different students as it depends on the individual's ability to cope with the stress full events and situations [8,9]. Stress will be there in all type of medical students, in all the medical colleges, as it is seen in our college students also; may be factors affecting the stress or the coping strategies will be little different from other studies. In our study, The most common symptom of stress in males was difficulty in making decisions, change in sleep and difficulty in communicating with people .In females most, common symptom were difficulty in making decisions, loneliness, change in sleep pattern and inability to concentrate. The most common cause of stress was academics [7], [10], second common was exams and the third cause was homesickness in both males and females. Most common coping strategies to reduce the stress in males was spending time with friends [7], [11], second common was listening to music and taking rest, third was involving in sports and games. Among the females common coping strategy was taking rest and listening to music, second was spending time with friends and the third was spending time alone, these results were comparable with other studies[7]. There was a significant difference between males and females in stress symptoms, causes and coping strategies. As in some of the previous research gender wise difference of stress was not seen [11], but in our study symptoms of stress like fatigue was significantly more in males compared to females, homesickness was more in females and coping strategies like taking rest, involving in sports, self-isolation and participation in college cultural activity were significantly more in males. In other study, there was a difference of perceiving stress between hostilities and day scholars, [11] in our study low mood was most common in hostilities and they cope with this by listening to music. But some studies have not shown any difference between hostilities and day scholars. [12]

Medical faculties need to be aware of these problems. They should take a step forward to identify and deal with them as soon as possible. Medical students need to be taught the structured time management skills, to reduce their stress small group teaching, counselling will also helpful. [13] Faculties should also put their effort to find out the causes of low moods in students as it is seen more common in hostilities, so that the cause can be solved. Communication of faculties with students regarding their academic performances, family problems should not be neglected, as they can be dealt with small

groups. College should also contribute to reduce students stress by conducting sports meets, social events and quiz programs. Further studies are needed to prove the efficiency of coping strategy, shown in our study, as a good stress buster.

Limitation-lack of generalization of our results to students of other medical colleges and questionnaires were having limited options in which some of the stress symptoms, causes or the coping strategies may not be there which the students may be opting for.

In conclusion, there are many stress factors once the students enters the medical field and most of students will try to cope with these stress factors by their own different coping strategies. Along with this medical faculty should be aware of students stress factors, problems and try to deal with them as early.

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