

Perception of Stress and Coping Strategies by 1st year Medical Students: A Cross-Sectional Study

FARIDA MANZUR¹, NAIMA JAVED², FARAH AMIR ALI³, HABIB SUBHANI⁴

ABSTRACT

Background: Medical education is supposed to be stressful and great level of stress may have a damaging effect on cognitive functioning and education of the students in a medical school.

Study design: Cross sectional study

Aim: To evaluate the perception of stress among medical students and to explore its coping strategies by medical students.

Methods: A total of 300 first-year medical students at Sargodha Medical College, Sargodha (125 males, 175 females) were invited to fill-in a self-administered questionnaire on the last day of the 2012-2013 academic year. The questionnaire comprised 20 items on stress factors and 15 items on coping strategies. The responses were measured quantitatively on a five-point Likert scale.

Results: The response rate was 60. The stress factors recognized by students were concern about trying to learn all the content followed by difficulty in memorizing content, lack of time to study and occurrence of multiple tests at the same time. The coping techniques were getting together with family and friends, going out to dinner, eating well and walk, avoid comparing grades with other students.

Conclusion: The occurrence of apparent stress among medical students was elevated and this might influence not only their academic grades but also all phases of health and life. There is a broad collection of strategies for coping with stress and these strategies could play an important role in facilitating students cope with stress.

Keywords: Coping strategy, stress

INTRODUCTION

Everyone encounters stress. It is a usual response that every person undergoes at one time or the other. It is a part of human personality. Stress is the body's reaction to risk or perceived threat. Many things in life can cause stress¹. Medical studies consists of complicated, demanding courses over an extensive period and are identified source of stress and anxiety among medical students^{2,3,4,5}. College students, especially fresh students are a unit which is remarkably exposed to stress owing to transitional makeup of college life. They must modify for being away from home for the first time, sustain a distinguished aim of academic environment and amend to a different social environment⁶. Stress in medical students is getting consideration because it has been accepted that exhausted, nervous doctors may not offer first-class attention. Studies have also described other harmful penalties of stress^{7,8}.

Stress can affect the students in many ways, both physically and mentally; ultimately decreasing the academic goals and achievements and also lowering their integrity and esteem^{9,10}. Nowadays

there is an increased attention towards different stresses encountered by medical students during their training in medical school. The sources of stress can be categorized as: academic, social and financial¹¹. In medical training the goal is not only to educate the students but also focus on their quality of life during their stay^{11,12,13}.

Coping can be described as continuous efforts made by a person which involve both cognitive and behavioral, to solve or resolve some particular issues disturbing his/her thoughts. Those students who can solve their issues and stresses in a positive manner tend to develop very low levels of psychological stress and anxiety¹⁴.

These coping techniques are the specific efforts that people often use to reduce or decrease, tolerate or minimize the anxiety provoking thoughts/events. Different strategies have been under consideration to deal with stress in medical students which include support and mentoring programmes, stress reduction exercises and classes etc. In view of these benefits of coping stress in an efficient way; it is important for the students to inculcate and develop such skills and methods as early in medical school as possible hence improving their quality of life^{15,16,17}.

Studies from United Kingdom have noticed different coping techniques among medical students in which use of alcohol is most common^{18,19}, but some have reported the use of tobacco and drugs as well^{20,21}. Developing countries like India, Pakistan,

¹Associate Professor Community Medicine

²Associate Professor Pharmacology, ³Associate Professor Physiology, ⁴Professor Medicine, Aziz Fatimah Medical & Dental College Faisalabad

Correspondence to Dr. Farah Amir Ali, Associate Professor
Email: farah.zulfqar@yahoo.com

Thailand and Malaysia have reported stress in medical students which has underscored the involvement of academics^{22,23,24,25}.

The objectives of this study was to estimate perception of stress factors and their sources, severity and coping strategies which first year medical students are using and their effectiveness.

MATERIALS & METHODS

The study is a cross sectional survey using an anonymous self-administered questionnaire. The institutional ethics committee approved the study. The study was carried out at the end of 2012-2013 session. 300 first year medical students were briefed about the purpose and objective of the study. Verbal consent was sought to participate. They were assured about anonymity and confidentiality of the responses given in questionnaire and instructed to return the completed questionnaire. The questionnaire comprised of questions on stress factors and on coping strategies. It was reviewed before administration by a committee in medical education department for content validity; its reliability and validity were evaluated statistically. The questions were pilot tested before administration. The questionnaire required 3 minutes to complete. The responses were sorted quantitatively on a 5-point Likert scale and data was analyzed with SPSS.

RESULTS

Of 300 first year medical students, 180 completed and returned the questionnaire (response rate 60%).

Of these, 65 were male (36.1%) and 115 were females (64%).

Table 1 shows the students' perception of different stressors. The commonest stress factor was concern about learning all the course content (39% strongly agreed). Other factors were multiple tests at the same time (33% strongly agreed), lack of time to study the material to be tested (32% strongly agreed), difficulty in memorizing the content (32% strongly agreed) and frequent tests (31%). Students disagreed that teachers' lack of time (34%) and having high parental expectations (31.1%) were stressors, and almost half of them (29.4%) strongly disagreed that marriage, having children and family problems (17.8%) were risk factors.

Table 2 shows that 75 students (42%) strongly agreed that getting together with family and friends was a coping strategy that helped them overcome stress, followed by going out to dinner (32.2%), eating well (23.3%), avoiding comparing grades with other students (26.1%) and going for walks (22.2%). Seventy-four students (41.1%) agreed that use of humor was a coping strategy. In contrast, 50(28%) disagreed that cooking, reading of literary non-medical works and watching football games on television were coping strategies to overcome stress. Self distraction was also disagreed by 65(36.1%). Forty-eight students (27%) strongly disagreed that watching football games on television helped them overcome stress followed by 35 students (19.4%) by their self distraction.

Table 1: Perception of Stressors by first-year medical students

Item	Strongly agree	Agree	True sometimes	Disagree	Strongly disagree
Frequent tests	55(31%)	52(29%)	45(25%)	19(10.6%)	09(5%)
Lack of time to study	57(32%)	42(23.3%)	50(28%)	17(9.4%)	14(8%)
Studying into night	46(26%)	51(28.3%)	41(23%)	25(13.9%)	17(9.4%)
Missing classes	20(11%)	28(15.6%)	65(36.1%)	54(30%)	13(7.2%)
Multiple tests at same time	59(33%)	54(30%)	48(27%)	13(7.2%)	06(3.3%)
Quality of food in mess	29(16.1%)	45(25%)	70(39%)	20(11.1%)	16(8.9%)
Amount of details required by teacher	25(13.9%)	56(31.1%)	71(39.4%)	25(13.9%)	03(1.6%)
Adjustment with roommate	11(6.1%)	45(25%)	61(33.9%)	54(30%)	09(5%)
Daily activity unrelated to college (Paying bills, cleaning)	28(15.6%)	48(27%)	45(25%)	47(26.1%)	12(6.7%)
Teachers' lack of time	10(5.6%)	39(22%)	57(32%)	61(34%)	13(7.2%)
Worry about future	38(21.1%)	44(24.4%)	44(24.4%)	35(19.4%)	19(10.6%)
Heavy demand on students to study	45(25%)	72(40%)	35(19.4%)	15(8.3%)	13(7.2%)
Concern about trying to learn all the content	70(39%)	55(30.6%)	30(17%)	15(8.3%)	10(5.5%)
Difficulty in memorizing the content	57(32%)	56(31.1%)	45(25%)	18(10%)	04(2.2%)
Studying the material that students consider unnecessary for their professional qualifications	36(20%)	36(20%)	70(39%)	28(15.6%)	10(5.6%)
Competitiveness among student	14(7.8%)	40(22.2%)	42(23.3%)	56(31.1%)	28(15.6%)
Waking up early to go to college	40(22.2%)	26(14.5%)	42(23.3%)	50(28%)	22(12.2%)
Family problems	18(10%)	20(11.1%)	48(27%)	62(34.4%)	32(17.8%)
Marriage & children	12(6.7%)	16(8.9%)	25(13.9%)	74(41.1%)	53(29.4%)
High parental expectations	30(16.7%)	35(19.4%)	50(28%)	56(31.1%)	09(5%)

Table 2: Perception of coping strategies by first-year medical students

Items	Strongly agree	Agree	True sometimes	Disagree	Strongly Disagree
Planning	27(15%)	54(30%)	70(39%)	25(14%)	4(2.2%)
Acceptance	13(7.2%)	48(27%)	59(33%)	40(22.2%)	20(11.1%)
Use of humor	23(13%)	74(41.1%)	60(33.3%)	10(5.5%)	13(7.2%)
Avoiding comparing grades with other students	47(26.1%)	62(34.4%)	53(29.4%)	10(5.5%)	8(4.4%)
Going to the movies on weekends	19(10.5%)	58(32.2%)	50(28%)	35(19.4%)	18(10%)
Going for walks	40(22.2%)	58(32.2%)	48(27%)	22(12.2%)	12(6.6%)
Getting together with family friends	75(42%)	65(36.1%)	35(19.4%)	5(3%)	
Cooking	28(16%)	25(14%)	47(26.1%)	50(28%)	30(17%)
Eating well	42(23.3%)	73(40.5%)	35(19.4%)	22(12.2%)	8(4.4%)
Sports	9(5%)	40(22.2%)	62(34.4%)	44(24.4%)	25(14%)
Reading of non-medical books	20(11.1%)	30(17%)	71(39.4%)	50(28%)	9(5%)
Listening to music	23(13%)	48(27%)	40(22.2%)	38(21.1%)	31(17.2%)
Watching football games on TV	17(9.4%)	30(17%)	35(19.4%)	50(28%)	48(27%)
Going out to dinner	58(32.2%)	64(35.5%)	48(27%)	7(4%)	3(1.7%)
Self-distraction	3(1.7%)	25(14%)	52(29%)	65(36.1%)	35(19.4%)

DISCUSSION

The results of this study with regard to stressors are similar to those in the literature, which includes curricular factors, academic concerns, multiple tests, little time for leisure and sleeping difficulties^{26,27}. Students at Sargodha Medical College are facing with the problem of multiple and frequent tests in a short period of time giving them a very less time to focus on every subject resulting in lack of attention.

The present study showed that examinations/ tests are a major source of stress but they are important to evaluate students' performance, encourage them to study and lastly provide feedback to the teachers as well. Therefore, to decrease this level of stress among medical students, the teachers can focus on solving their problems. The number of tests and their frequency can be changed and such timings can be adjusted to help provide a friendly positive environment.

The strategies which the students identified for coping with stress covered all the categories which have been reported early²⁸ and recommended student support systems, wellness, counseling and preventive mental health services, stress management programmes and training workshops²⁹. In USA in a university, a stress reduction course was offered to second-year medical students³⁰. That was successful in those students who were more anxious and decreased anxiety levels in pre-clinical medical students.

Academic guidance offices which help to support the students have been established in various colleges where they play an important role in helping students to cope with different stressors. Further studies are needed to evaluate the role of these Academic offices, Students Rights and council in helping to reduce stress.

CONCLUSION

Medical students face a very wide range of stress factors but find coping strategies also to overcome them. Apart from friends and family, various activities help them to relieve their stress but Student Council and academic guidance offices can play their role in helping them to cope with stressors.

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