

Original Research Article

Perceived stress and coping strategies among post graduate students of a medical college in Thrissur, Kerala

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ABSTRACT

Background: Medical education is inherently demanding and stressful. Stress is an external constraint which upsets an individual both mentally and physically. The postgraduate students suffer from higher stress that definitely affects the mental wellbeing of these students. Stressors faced by post graduate students include time pressure to meet deadlines, large amount of content to be learnt, work overload, unfair assessment by superior, fears of making mistakes that can lead to serious consequences, work demands affecting personal and home life. Objectives of the study were to assess the perception of stress amongst post graduate medical students and to assess various coping strategies employed by them.

Methods: Predesigned, pretested, validated, self-administered, structured questionnaires were used for data collection over a period of two months. The Perceived Stress Scale (PSS) was used for measuring the perception of stress. Brief COPE inventory was used to assess the various coping strategies medical students use to deal with the stresses in their life.

Results: One fourths of the study subjects (25%) were under high stress while 68.3% of the students were under moderate stress. Use of emotional support, self-distraction and venting were the common coping strategies employed.

Conclusions: The prevalence of perceived stress seems to be high among post graduate medical students. Review of academics and exam schedules, more leisure time activities, advisory services and peer counseling at the campus could do a lot to reduce the stress.

Keywords: Post Graduate, Medical students, Perceived stress, Coping strategies

INTRODUCTION

Stress is a normal and mostly, beneficial part of our lives that can help one learn and grow. Most people are more active, creative and productive because of stress. But on the other hand, stress can cause significant problems. Prolonged, unexpected and unmanageable stress is damaging to any individual. Many individuals manage stress by regular exercise, yoga, meditation or learning new coping strategies or relaxing techniques to create an amount of predictability in their lives.¹

Medical education promises a well-respected career, but brings along a lot of tough demands on aspiring students that includes tight schedules and a vast course compacted in a short duration. This leads to an unenviable state of stress and anxiety among a lot of students. A physically and emotionally demanding course can inadvertently lead to physical and psychological problems in students. Besides academic stressors, some students also face social, emotional, physical and family problems which may affect their learning ability and academic performance.² A moderate degree of stress is often said to promote creativity and is deemed necessary but intense

pressures may result in impairments in the student's social, educational and personal spheres which then eventually may have an impact on patient care.^{3,4} Some students find it hard to cope with the stress they face and lag behind, while others see the pressure as challenge to work harder. Medical students are particularly prone to perceive themselves more likely to become ill than others.⁵

Student's lifestyles play an important part in their well-being and ability to cope. Both harmful as well as constructive coping strategies are employed by the students. Spending time with friends, indulging in sports, music and social media are some of the common coping strategies employed. The use of alcohol, cannabis and illicit drugs is reported to be on the increase among medical students.⁴ Lifestyle changes like diminished leisure and recreational activity, decreased physical activity and sleep deprivation has an impact on the emotional well-being of the medical student.⁶ Cognitive functioning as well as the learning of students could be affected negatively by high levels of stress.⁷

There is a stigma associated with mental health problems, which may deter sufferers from seeking help. This may be a particular problem among those in the medical profession. Additionally, deficits in health care have been found to be associated with stress, and the importance of identifying and managing mental health problems in medical students before qualification is vital.⁶

Very few studies have assessed the perception of stress among students, and still fewer have dealt with medical students.⁸ Post graduate medical students are a further smaller niche. This study not only explores the different perceptions of 'stress' amongst the post graduate medical students community, but also looks into various coping strategies adopted by them to deal with the problem.

METHODS

The study population constituted all the first and second year post graduate students (M.D/M.S) of Amala Institute of Medical Sciences, Thrissur. Final year students were excluded as their duty schedules are different from other students. Predesigned, pretested, self-administered, structured questionnaires were used for data collection over a period of two months from September to October 2017. A written consent was taken and complete confidentiality was assured. Sixty post graduate students from various streams completed the questionnaire.

PSS by Sheldon Cohen was used for measuring the perception of stress among medical students. It is a measure of the degree to which situations in one's life are appraised as stressful. A score was calculated for each student from 10 items. Scores ranging from 0-13 were considered as low stress, 14-26 as moderate stress and 27-40 were considered as high perceived stress.⁹ Brief

COPE inventory by Carver et al, which is a validated and abbreviated version of the COPE inventory, was used to assess the various coping strategies, medical students use to deal with the stresses in their life.¹⁰ It consists of 14 scales/categories each having 2 items, thus total 28 items. The scales are: 'self-distraction', 'active coping', 'denial', 'substance use', 'use of emotional support', 'use of instrumental support', 'behavioural disengagement', 'venting', 'positive reframing', 'planning', 'humour', 'acceptance', 'religion' and 'self-blame'. The data obtained was coded, entered in Microsoft Excel sheet and analyzed using the statistical software, Statistical Package for Social Sciences (SPSS Version-23). Chi square test was applied and p values have been quoted where applicable.

RESULTS

In the present study 68.3% of the PG students were females. According to the Perceived Stress Scale, 25% of the study subjects were under high stress, 68.3% under moderate stress and 6.3% perceived low stress. Among females, 34.1% of the students felt high stress and over 58% felt moderate stress. While among males, nearly 90% of the students felt moderate stress. The difference between the groups were found to be statistically significant (Table 1 and 2).

Table 1: Distribution of study subjects according to perceived stress.

Perceived stress score	Frequency	Percentage (%)
Low stress (0-13)	4	6.7
Moderate stress (14-26)	41	68.3
High stress (27-40)	15	25.0
Total	60	100.0

Table 2: Association between gender and perceived stress.

Gender	Perceived Stress (%)				P value
	Low	Moderate	High	Total	
Female	3 (7.3)	24 (58.5)	14 (34.1)	41	0.024
Male	1 (5.3)	17 (89.5)	1 (5.3)	19	
Total	4 (6.7)	41 (68.3)	15 (25.0)	60	

Most common coping strategies employed by students were self-distraction, active coping, planning, positive reframing and acceptance (Table 3). Association between various coping strategies and perceived stress was checked. Self-blame as a coping strategy was used by 25 (41.67%) of the study subjects and all of them perceived either moderate or high stress. The difference between the groups was found to be statistically significant (Table 4).

Table 3: Coping strategies employed by study subjects.

Coping strategies	Yes (%)	No (%)
Self-distraction	44 (73.3)	16 (26.7)
Active coping	44 (73.3)	16 (26.7)
Denial	9 (15)	51 (85)
Substance use	0	60 (100)
Use of emotional support	36 (60)	24 (40)
Use of instrumental support	33 (55)	27 (45)
Behavioral disengagement	10 (16.7)	50 (83.3)
Venting	26 (43.3)	34 (56.7)
Positive reframing	40 (66.7)	20 (33.3)
Planning	42 (70)	18 (30)
Humour	19 (31.7)	41 (68.3)
Acceptance	40 (66.7)	20 (33.3)
Religion	28 (46.7)	32 (53.3)
Self-blame	25 (41.7)	35 (58.3)

Table 4: Association between coping strategies and perceived stress.

Coping strategies.	Perceived stress (%)		Total	P value
	Yes	No		
Self-distraction	41 (93.2)	3 (6.8)	44	0.937
Active coping	42 (95.5)	2 (4.5)	44	0.303
Denial	9 (100)	0	9	0.245
Use of emotional support	33 (91.7)	3 (8.3)	36	0.514
Use of instrumental support	31 (93.9)	2 (6.1)	33	0.836
Behavioral disengagement	10 (100)	0	10	0.218
Venting	25 (96.2)	1 (3.8)	26	0.431
Positive reframing	38 (95)	2 (5)	40	0.476
Planning	40 (95.2)	2 (4.8)	42	0.386
Humour	18 (94.7)	1 (5.3)	19	0.762
Acceptance	37 (92.5)	3 (7.5)	40	0.708
Religion	27 (96.4)	1 (3.6)	28	0.356
Self-blame	25 (100)	0	25	0.034

DISCUSSION

It is expected from medical students to learn and master a huge amount of knowledge, attitudes and skills in a short span of time for which they have to put in a lot of effort, which in turn put them under a lot of stress. In a study among post graduate students in Maharashtra, 30% were having mild stress, 20% were having moderate stress and 2% of study subjects reported severe stress. The same study also showed a moderately higher level of anxiety among the students.¹¹ The present study also showed a high-stress level in post graduate medical students. In a study conducted among Undergraduate medical students in Mumbai, 36% experienced mild levels of stress, 57.7% had a moderate degree of stress while 5.97%, experienced severe stress.³ The prevalence of moderate and high stress among medical students were 55.7% and 35.4% respectively, in a study conducted in Kolkata.¹²

Efficient coping strategies can act as a buffer between students and the various stressors affecting them. In the present study, 'self-distraction' and 'active coping' are the most commonly utilized coping strategies while, 'self-blame' was found to be significantly associated with perceived stress. In a study conducted among undergraduate students in Kerala, most students were getting stressed due to academic stressors, out of which, 66% had high stress. Group activities related stressor was the next common stress inducing domain, wherein, 27% students had high stress. Planning was the most utilized coping method by the participating students, while substance use was least adopted by them in case of stressful situation.¹³ Similar result revealing academic stressors as the source of maximum stress was obtained by Gupta et al in Kolkata.¹² In a study by Shakthivel et al in Tamil Nadu, India, it was observed that the most commonly employed coping mechanism was 'religion' followed by 'self-distraction'.¹⁴ Results obtained by Samira et al showed 'self-blame' and 'self-criticism' as the common reactions to stress. Religious coping was frequently adopted as a coping measure by the students, while use of alcohol or other drugs was found to be rare.¹⁵ Sreeramareddy et al found positive reframing and planning as the coping strategies commonly used by students in their institution in Nepal.¹⁶

It is pertinent on the part of medical educators to assess the stressors and various coping strategies of their students at the beginning as well as during the course of their medical education and mentor them to use desirable coping strategies to reduce stress, which will eventually help the society to have better doctors. For a postgraduate student, extended duty hours, increased workload and dealing with patient related issues like emergency situations, trauma cases, death etc. can hamper their ability to carry forward their personal and familial responsibilities. Reviewing their current duty schedules and fixing their work hours might be a good way to alleviate the stress. Supportive, nonthreatening educational environment in the institution which helps in

better interaction among their peers and also with their teachers can help students to cope with the various stressors. Informal peer, faculty and professional support programs are essential to reduce the effects of perceived stress. Due curricular importance should be given to areas like difficult patient encounters, practice management and personnel management that are directly related to stress.

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