

Perceived Academic Stress Among Undergraduate Medical Students and Their Coping Strategies

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Abstract

Objective: To identify the factors causing academic stress among undergraduate medical students of government and private sector medical colleges. To identify the methods adopted by these students to overcome academic stress.

Method: It is a quantitative study done on medical students of one public and one private sector medical college. Nawaz Sharif Medical College, Gujrat and Islam Medical and Dental College, Sialkot was included. It was done over 6 months i.e. 1.1.2021 to 30.6.2021. Ethical approval was taken from both colleges. 50 students each from fourth and final year were taken from both medical colleges. Total sample size was of 200 students. Simple random sampling was done. The data was collected using PASS scale. The questionnaire was distributed among 50 students of each class of 4th and final year and asked to fill on voluntary basis. Data is analyzed using SPSS version 20.

Results: Academic stress level in public sector medical college was low in 25%, moderate in 40% and severe in 35%. As compared to this, the private sector students were having low stress level in 10%, moderate in 30% and severe in 60%. The major coping strategies adopted by the students to relieve stress were Venting off emotions, use of social support, and religious coping.

Conclusion: This study guides the authorities to modify the curriculum and teaching environment of medical colleges of Pakistan to decrease the academic stress and ultimately improve the academic performance of our students. This also indicates the student's personal awareness of stress and need for psychological support.

Keywords: academic stress, PASS Scale, examination, assignments.

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Introduction

Stress is a natural response to day to day activities which may be due to elating or depressing events. Every human being has a different response to stressful circumstances. Some take it as a challenging task while others perceive it as a threat to their identity.¹

When the students are entering in professional studies,

they are new in that environment. It leads to development of academic and non-academic stress. If not managed effectively, this can lead to certain minor or major problems.^{2,3}

Presence of academic stress in undergraduate medical students is a known entity. Various factors can influence the development of academic stress which may include non-academic factors like social conditions, emotional state, family support and health status of the students. All these influence the ultimate final performance of the student in examination and can affect their performance badly. Also it can result in acquiring psychological illnesses like depression and anxiety. The high dropout rate of medical students is also due to high stress levels.^{4,5} High pressure of parents and society to perform best

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at each and every step of medical college is an important contributing factor for development of stress in students. There is intense pressure by peers and siblings as well. All this stress can lead to development of psychiatric illnesses in medical students.^{6,7} Insecurities about the future are also contributing to high stress levels. Unrealistic goals set under all the above stated pressures lead to high failure rates and poor self-esteem. Self-regulation and mindfulness are two very important tools in efficient functioning of day to day tasks. It is also seen that self-regulation has an important role in decreasing academic stress and improving overall performance.⁸⁻¹⁰

Material and Methods

It is a quantitative study done on undergraduate medical students of one government and one private sector medical college. Nawaz Sharif Medical College, Gujrat. Islam Medical and Dental College, Sialkot. Ethical approval was taken from Institutional review boards of both colleges before start of the study. This study was done in 6 months i.e. from 1 Jan 2021 to 30 June 2021. Ethical approval was taken from IRB of each college. 50 students each from fourth and final year were included from each medical college. Total sample size was of 200 students. Simple random sampling was done. All students of fourth year and final year was included. Participation of students was totally on voluntary basis. Both male and female students are included. Students of first, second and third years are excluded. The students not willing to participate voluntarily are excluded. The data is collected using PASS (Perception of Academic Stress Scale). This calculated the level of academic stress. The commonly adopted coping strategies for stress by students were identified. The questionnaire was distributed among students of each class of 4th and final year and asked to fill these on voluntary basis. Anonymity is observed during the whole process. Individual scores on the PASS can range from 0 to 40 with higher scores indicating higher perceived stress. Scores ranging from 0-13 would be considered low stress. Scores ranging from 14-26 would be considered moderate stress. Scores ranging from 27-40 would be considered high perceived stress. Data is analyzed using SPSS version 20. Means and standard deviation is calculated of each causing factor for academic stress.

Results

Females were in majority as compared to male students. Most of the students in our study were living in their

homes (**Table-1**). Public sector medical college students were having less academic stress as compared to private medical college students in this study (**Fig-1**). But students of both categories of medical colleges were able to identify academic stress effecting their mental health and learning capabilities. Fourth year medical students were having less score for stress at PASS as compared to

Table 1: Demographic factors

Demographic variable	No of Students (%)
Gender	
-Male	55(27.5%)
-Female	145(72.5%)
Age	
-20-21 yrs.	85(42.5%)
-22-23 yrs.	90(45%)
-24-25 yrs.	25(12.5%)
Residence	
-Home	89(44.5%)
-Hostel	111(55.5%)

Table 2: Mean score of stress according to PASS among fourth and final year students

	Fourth year Mean Score	Final year Mean Score	Total Mean Score
Public Sector Medical College	25	36	30.5
Private Sector Medical College	26	40	33

Table 3: Coping strategies adopted by students

Sr No.	Coping Strategies	No. of Students Adopting the strategy	Percentage
1	Focus on and venting of emotions	114	57
2	Use of instrumental social support	150	75
3	Denial	89	44.5
4	Religious coping	167	83.5
5	Planning	102	51
6	Mental disengagement	54	27
7	Positive reinterpretation	98	49
8	Humor	147	73.5
9	Acceptance	134	67

final year students (**Table-2**). Different type of coping strategies were used by students to overcome stress. In our study religious coping was seen most common followed by social support and humor to alleviate stress (**Table -3**).

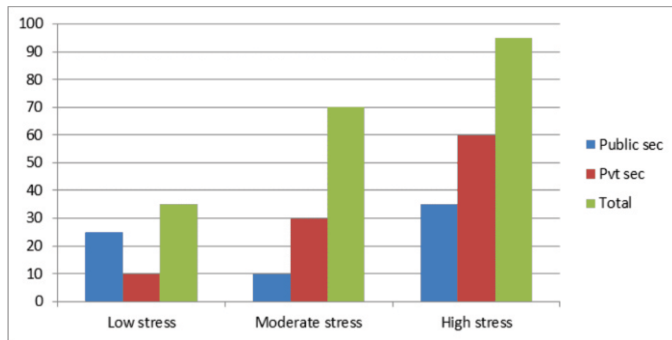


Fig 1: Distribution of students according to perceived stress levels

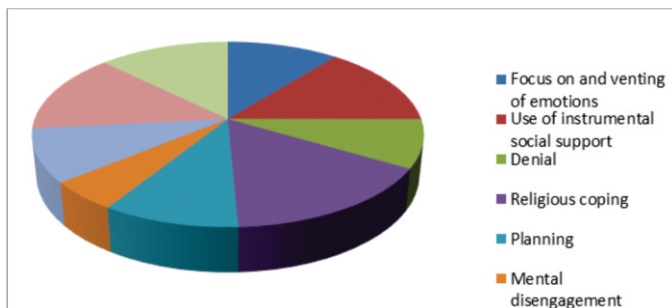


Fig 2: Coping strategies adopted by students

Discussion

The study revealed that the presence of academic stress among undergraduate medical students is an important factor affecting their performance. It can be modified by varying strategies at college campus. In this study, the high level of stress is seen more in private sector medical college students as compared to public sector medical college. The public sector medical students have low to moderate stress commonly.

Students used different coping methods to overcome the stress. Religious beliefs, social contacts and humor were most important coping factors to decrease stress level.

These are comparable to the study conducted by Manjiri C.Datar et al in 2017¹¹ and Leonardsen A-CL, Jelsness-Jørgensen in 2019¹² which concluded that the students develop stress during academic activities which can be decreased affectively by focused management strategies.

The results are also similar to the study conducted by George Essel et al in 2017¹³ and Paudel U, Parajuli A et al in 2020.¹⁴ It also showed that stress affects academic performance of the students. Affective strategies and regular sessions for stress management could help in improving performance of the students. A study done by Nieve O Brien in 2014 and Onieva-Zafra MD et al in 2020 addressed the important point that output of a student can be improved by addressing different aspects of student's life including health, finances, teaching sessions, focused and constructive feedback, time management and study methods etc. All these strategies help in developing a strong bond between student and teacher. These results are in accordance with our study.^{15,16}

The same results are seen in study conducted by Nur Hamizah Hj Ramli et al in 2017. It showed that academic stress is a very commonly present condition that effects the student's performance. Multiple factors like lengthy syllabus, peer pressure, exam fear and future plans etc. effect the mental health of the student. All these can be managed effectively by using coping strategies like self-regulation and mindfulness.⁹ Joseph N, Nallapati A et al in 2022 showed same results.¹⁷ Also comparable results are seen in a study conducted by Sherlyn S Jimenez et al in 2018 which suggested that mindfulness help in targeting negative emotions, low mood and negative self-image.¹⁸ Another study done by Priya Gangadharan in 2014 also stated that academic stress exists in undergraduate medical students and certain methods can effectively reduce it.¹⁹ In a study done by Purna Prabhakar Nandamum et al in 2011 concluded that stress is high in professional degree program students. Different aspects of stress are curriculum and staying updated in their subject, pressure of colleagues, communication difficulties, future goals etc. Identification of these factors could help in adopting strategies to lower the academic stress.²⁰ Wang Y, Xiao H et al in 2020 also showed similar results.²¹ In the studies, conducted by R. Anuradha et al in 2017, Kötter T, Wagner J et al in 2018 and Thomas C, Zolkoski S. et al in 2020, it was found that the stress level increase with promotion in next class and with increase in age which is also seen in our study.²²⁻²⁴

Conclusion

This study identifies the severity of the stress in undergraduate medical students of government and private sector medical colleges of Punjab, Pakistan. Various

coping strategies were adopted by students to cope the stress. This study guides the authorities to modify the curriculum and the teaching environment of medical colleges of Pakistan to decrease the academic stress and ultimately improve the academic performance of our medical students. This also indicates the student's personal awareness of stress and need for psychological support to them.

Conflict of Interest *None*

Funding Source *None*

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Authors Contribution

SSW: Conceptualization of Project

SSW: Data Collection

SSW: Literature Search

SSW: Statistical Analysis

SSW: Drafting, Revision

SSW: Writing of Manuscript