



Original Article

Stress and Coping Strategies Among Postgraduate Medical Students in Lahore

Rija Tariq¹, Maria², Ammara Jabeen³, Sehar Murtaza⁴, Hamza Dastgir^{1*}, Laraib Khalid¹

^{1*}Coventry University, United Kingdom

²Xi'an Jiaotong University, China

³Rashid Latif Medical College, Lahore, Pakistan

⁴Central Park Medical College, Lahore, Pakistan

ABSTRACT

Background: It can be very stressful for students to be under constant pressure to succeed in becoming highly qualified healthcare professionals. Postgraduate and professional students were found to experience higher levels of stress than usual when age and gender were compared with populations of the same type. Negative effects of stress include poor academic performance, diminished reasoning ability, decreased coping and difficulty following graduate courses.

Objective: To learn about coping mechanisms and stress among postgraduate medical students in Lahore. **Methods:** This study included 101 postgraduate medical students from the campuses of private universities in Lahore and Islamabad. Informed consent forms were used to include participants. Google forms were used to create an online survey, which was then shared on Instagram and WhatsApp. A perceived stress scale was used to access the various stressors and the brief COPE inventory was used to look at the students' efficient coping mechanisms. An analysis of postgraduate students' coping mechanisms and the relationship between stress and gender was done. The data from Google forms were processed, placed into Microsoft Excel and analyzed with SPSS version 25. The findings were presented in the form of tables and graphs.

Results: Among postgraduate medical students or nearly one-fourth (21.8%) of participants reported high stress, while 72.3% reported moderate stress, with men reporting higher levels of stress than women. The most common coping strategies were active coping, acceptance, planning and religion. **Conclusion:** It seems that graduated students are under more stress and positive psychological approaches should be made available by university administration and professors to help students deal with the demands of pursuing a degree in the medical field. Ignoring these elements would not give students the best chances for learning and employment.

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***Corresponding Author:** Hamza Dastgir, Coventry University, United Kingdom

Email: hamzadastgir@gmail.com

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INTRODUCTION

Mental health was defined by the World Health Organization as "a condition of well-being in which a person concede his or her potential, can go through varied life demands, can work productively, and can give to his or her environment".¹ Poor educational outcomes have been associated with psychological disturbance in pupils, endangering the learning process. This needs to be taken seriously, especially if it can jeopardize patient care and safety.² Years of tough study and constant training are required in this field.³ The ongoing pressure that students experienced as they worked to become highly skilled healthcare professionals may occasionally result in considerable suffering.⁴

Many studies from the West and other parts of the world have revealed significant rates of psychological illness among students, including psychological distress.⁵ Students studying physiotherapy believe that completing so many academic tasks, long study sessions, lack of free time and hospital rounds all contribute to their stress levels. Furthermore, research revealed a correlation between stress levels and the prevalence of illnesses, infections, digestive troubles, neural and mental diseases, as well as other health concerns.^{6,7}

The graduate student's apparent source of stress had not been identified or addressed, which had led to role confusion as well as decreased effort and performance after graduation.⁸ Determining the stress levels and root causes of the students was the first step in creating the optimal learning environment that every academic institution was responsible for.^{8,9} Although medical school offered ambitious students a promising future, it also came with a variety of demanding conditions, including rigid schedules and a huge course load, squeezed into a short amount of time.¹⁰ As a result, a lot of pupils went through unpleasant levels of tension and

anxiety.¹¹ Due to the physically and emotionally demanding nature of the training, some students have suffered physical and psychological issues.^{12,13} In addition to academic pressures, some students experienced social, emotional, physical, and family problems, all of which could harm their capacity for learning and academic success.¹⁴ Extreme stress affected students' social, academic, and personal lives, which had an impact on healthcare.¹⁵ Moderate stress was generally seen to welcome variety and was regarded as necessary. While some students found it impossible to cope with their pressures, others saw the pressure as a drive to compete fiercely.¹⁶ Medical students felt that they were more susceptible to illness than other people.

Students' quality of life and ability to cope was significantly impacted by the way they lived.¹⁷ The pupils employed both negative and beneficial coping mechanisms.¹⁸ Spending time with friends, taking part in sports, listening to music, and using social media are some common coping techniques.¹⁹ There have been reports of an increase in the use of alcohol, marijuana, and illicit substances among medical students. Changes in lifestyle, such as less free time and relaxation, less physical activity, and less sleep, had an impact on medical students' mental health.^{20,21}

A lack of studies related to stress and coping mechanisms had been done in any university, particularly in Lahore. Second, it has been noted that the majority of studies done on the population of medical students have to do with their stress levels or disease state. Nevertheless, the students do not reveal the different coping mechanisms they are employing. Finally, the coronavirus pandemic has altered the situation and further increased the pressures already present. This study aims to increase the mental well-being of the students as well.

METHODS

This was an observational cross-sectional study in which non-probability convenient sampling was used. The population of the study consisted of postgraduate students of the University of Lahore, the University of Management and Technology and Riphah International University, Lahore and Islamabad campuses. About 101 postgraduate students from diverse disciplines of medicine participated in an online survey created with Google forms and distributed over WhatsApp and Instagram. Data were collected over six months from May to October 2021 using preconfigured, validated, self-administered, survey method. Formal consent was obtained and strict secrecy was maintained.

Sheldon Cohen's 10 items perceived stress scale (PSS-10) was used to evaluate medical students' perception of stress. This study included postgraduate medical students aged between 20 to 28 years and included both genders, whereas married students and those with a previous history of any medical or psychological condition were excluded. Another scale, the Brief COPE inventory by Carver et al. was used to measure the various coping mechanisms adopted by medical students to deal with challenges in life. It is made up of 14 scales/categories, each with

two things, for a total of 28 items. The data from Google forms were processed, placed into Microsoft Excel and analyzed with SPSS version 25. The findings were presented in the form of tables and graphs.

Mean and standard deviation was used to assess quantitative data like age, while frequency and percentage were used to describe qualitative factors like gender. The chi-square test was performed to determine whether there is an association between gender and disease status. A p-value less than and equal to 0.05 was considered significant. The sample size of 101 patients was calculated with a 95% confidence level. Where sample size (n) 101, $z=1.96$ for 95% CI 0.95, $p=0.932$ (expected true proportion) and desired precision (e) 0.05.

RESULTS

On the PSS, when asked to rate how often they had been upset due to an unexpected event in the previous month, the majority of 48 (47.5%) students reported feeling upset occasionally, while 17 (16.8%), 31, and 30.7% of students reported feeling upset very frequently. Five students (5.0%) did not report feeling upset nearly at all (Table I). Out of 101 PG students, majority of 40(39.6%)

Table I: Frequency of Being Upset Because of Something That Happened Unexpectedly

	Frequency	Percent (%)
Never	0	0
Almost Never	5	5
Sometimes	48	47.5
Fairly Often	17	16.8
Very Often	31	30.7
Total	101	100.0

Table II: Frequency of Feeling Nervous and Stressed

	Frequency	Percent (%)
Never	7	6.9
Almost Never	3	3.0
Sometimes	40	39.6
Fairly Often	35	34.7
Very Often	16	15.8
Total	101	100.0

Table III: Frequency of Unable to Control the Important Things in Your Life

	Frequency	Percent (%)
Never	7	6.9
Almost Never	6	5.9
Sometimes	22	21.8
Fairly Often	30	29.7
Very Often	36	35.6
Total	101	100.0

students reported feeling anxious or stressed at least occasionally, 35 (34.7%) reported doing so fairly frequently, and 16 (15.8%) said they experienced it frequently. Three students (3.1%) said they had never experienced either of these feelings, and seven students (6.7%) said they had never experienced either.

Out of 101 PG students, 36 (35.6%) students said they experienced this feeling frequently, 22 (21.8%) students said they experienced it occasionally, 30 (29.7%) students said they experienced it fairly often, 6 (5.9%) students said they almost never experienced and 7 (6.9%) students said they never experienced it at all in the previous month.

DISCUSSION

The stress levels and coping mechanisms employed by graduate and undergraduate medical students were summarized in 2015 by S. Sandover and D. Jonas-Dwyer in a five-year longitudinal research.²² The study found that although both groups assessed the same amounts of stress, they experienced it in different ways; graduates had greater external stressors like family, work schedules, and financial concerns. Yet, individuals dealt with stress in different ways. For example, undergraduates tended to employ escape and avoidance more than graduates, who favored methodical problem-solving techniques. This correlates with the findings of our study. A

study on stress, burnout, and their associations among dental undergraduates and postgraduate students conducted in India in 2018 concluded that there was statistically positive stress and burnout among orthodontic postgraduate students. The PSS reports the level of stress they have endured over the previous four weeks. The majority of participants in this study reported moderate levels of stress, and results from the PSS, which focused on general stressors faced by medical students after graduation, showed that males perceived only 4% more stress than females. Since both genders perceived nearly the same amount of stress, it is possible that the higher percentage of male participants in the study contributed to this finding.²³

The results of a similar study which was carried out in Thrissur, Kerala, for graduated medical students, showed a substantial difference between the two groups: females reported feeling greater stress than males.²⁴ This correlates with the findings of our study.

As most students marked sometimes for most of the PSS items, indicating that they were unable to explain their particular stress worries, in the current study. So, following the second highest score, mainly the students weren't able to manage irritations, essentials, and personal problems in their lives, and they frequently felt like difficulties piling up and they aren't able to overcome them. Only a few people were able to deal with the conditions, while others were frequently stressed when things happened unexpectedly.

This reveals their immaturity in terms of mental and emotional development. In the current study, the majority of students indicated occasionally for the majority of the PSS items, indicating that they were unable to adequately express their specific stress concerns. Hence, based on the second-highest score, the students primarily struggled to manage annoyances, necessities, and personal issues in their life. They regularly felt as though obstacles were piling up and they

weren't able to conquer them. Only just a few individuals were able to handle the circumstances, while others constantly became anxious when unexpected events occurred. This demonstrates their inexperience in terms of emotional and mental growth. Students will be able to manage stress more effectively in the future with the help of current actions. Similar results were found in a prior study with undergraduate nurses in Ambala, North India. Students will be able to manage stress more effectively in the future with the help of current actions.

Similar results were found in a previous study about undergraduate nursing students in Ambala, North India.²⁵ The findings of the study matches with this study. The Brief COPE Inventory, which divided the items into three groups based on different features, was used to examine the various ways in which pupils cope with stress. This involves problem-focused coping; its traits include active coping, the use of informational assistance, planning, and positive reframing. Venting, emotional support, humor, acceptance, self-blame, and religion are all characteristics of emotionally focused coping, which comes in second place. Avoidant coping, on the other hand, is characterized by self-distraction, denial, substance misuse and behavioral disengagement.

This study found that active coping and planning (problem-focused), acceptance and religion were the most popular positive coping strategies adopted by students when they were pressured (Emotionally focused). These qualities suggest a person's ability to handle stress in the long run, including mental toughness, persistence, emotional control, a practical problem-solving approach, and strong religious beliefs. Self-distraction was one of the avoidant behaviors, indicating that pupils are making conscious or unconscious efforts to detach from the stressor. According to a study by An et al., medical students utilize avoidant coping mechanisms to manage their high levels of academic stress.

Similar results were found in prior research on Malaysian medical students.²⁶ Another intriguing study revealed that people were using smartphones to help them deal with their anxieties. Pharmaceutical students used active coping, acceptance, and planning techniques to manage stress, and one aspect of their study that was proven to have positive impacts was exercise.²⁷ The findings of these studies did not match with the current study.

CONCLUSION

The pressure from family, parents, financial worries, job searches, or pressure to excel at their current profession, achieve life goals, and whether or not they will be able to advance in their careers are all possible causes of graduated students' apparent high levels of stress. The findings indicated that all postgraduate students were moderately stressed, with men being more stressed than women.

DECLARATIONS

Consent to participate: Written consent had been taken from patients. All methods were performed following the relevant guidelines and regulations.

Availability of data and materials: Data will be available on request. The corresponding author will submit all dataset files.

Competing interests: None

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