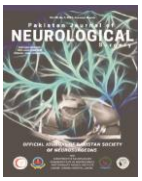

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Original Article (NEUROPSYCHIATRY)

Perceived Stress and Emotional Exhaustion among Undergraduate Medical Students of Gujranwala Medical College, Pakistan

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ABSTRACT

Objectives: The frequency of stress and emotional weariness, as well as the contributing elements, should be evaluated in order to determine a student's performance. A survey of undergraduate medical students was done to determine the factors linked to increased stress and emotional tiredness among medical students at Gujranwala Medical College (GMC) Pakistan.

Material and Methods: Data was collected using a structured questionnaire collected from undergraduate medical students. Information related to stress, nervousness, being upset, daily life restlessness, being irritated, being focused, satisfaction with the lecturing, financial strains, family-related stress, living problems, and career, was collected from the respondents via proforma with permission.

Results: 40.4% of students felt they had often faced stress during their last month with 37.1% facing unexpected events. Often students (34.4%) found restlessness during their last month with 39.1% of subjects feeling irritated by things happening around them. Some 35.8% of subjects had given thoughts to the future, 26.5% felt worthless and 33.1% forgot simple things or tasks. 39.1% felt they had difficulty focusing on the tasks given to them. Financial strain was always there in 3.3% and was rarely felt in 33.8% of subjects. Family-related problems were always there in 7.3% of subjects. 33.1% always felt dissatisfied with the quality of food in the mess. 29.8% of subjects felt they were unable to fulfill their parents' expectations while 22.5% felt they face stress about their career.

Conclusion: 40% of students are experiencing various forms of stress and emotional exhaustion. 33 percent of students always felt tension due to messed-up food, and 26.5 percent felt they always felt alone to deal with their problems. It is advised that the relevant authorities evaluate the findings and take some substantial actions to provide long-term answers to the students' challenges.

Keywords: Medical Students, Stress, Anxiety, College Life, Family Problems, Career Concerns, Hostel Life.

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INTRODUCTION

Burnout develops dramatically when the learning environment shifts from pre-clinical to clinical professional years. The degree of burnout is related to the incidence of depression. An integrated student-led strategy will be critical in overcoming the stigma associated with seeking student support services.[1] These findings imply that students at public sector medical universities are dissatisfied with their existing academic facilities and instructional activities. Students advocate for a greater emphasis on improved lectures and practical training, as well as the inclusion of career planning seminars for students to assist them to plan their future career routes.[2] The most common causes of stress and emotional fatigue have been identified due to increased competitiveness, and a lack of co-curricular activities for mental relaxation. A student's performance should be investigated by determining the frequency of stress and emotional exhaustion as well as its contributing factors. Therefore, a survey study was conducted and included undergraduate medical students, to find the factors associated with increased stress and emotional exhaustion in medical students of Gujranwala Medical College (GMC), Pakistan. This present study determined the frequency of stress and emotional exhaustion among medical students/undergraduates of Gujranwala Medical College. We wanted to assess factors directly or indirectly influencing or increasing this exhaustion rate in medical students. Medical students, like their more senior medical colleagues, face substantial levels of psychological anguish. They are unwilling to use typical college assistance agencies. Stress's toxic impacts on cognition, learning, engagement, and empathy may increase patient risk and bad outcomes. The emphasis on well-being in doctors should be extended upstream and integrated into the curriculum, where it can avoid future burnout, enhance retention in the profession, and result in improved patient outcomes.[3] Students' views regarding depression may impact their ability to recognize depressive symptoms. Incorporating these findings into undergraduate medical curriculum development may increase students' identification of depression.[4] When compared to other fields such as arts and engineering, life at a medical school is more difficult. The intrinsic nature of the medical curriculum and the expectations of the profession have put a lot of strain on its students, resulting in a lot of stress and stress-related diseases. The mental health of future doctors is critical for providing great patient care. As a result, it is past time for medical institutions to devise remedies to alleviate the situation. A substantial amount of research has been conducted to determine the primary stresses of medical education and the prevailing stress levels among medical students. According to the survey in South India, academic pressure, homesickness, teacher, and institution-related variables all provide challenges to students. It was also discovered that the pupils require assistance in dealing with these issues. These findings have intriguing and significant implications for institutions and policymakers in terms of devising interventions to foster a welcoming learning environment for our future doctors.[5]

Many governments have enacted policies aimed at increasing the number of students enrolled in higher education and financing this growth by shifting expenses from the state to the individual. This program has been pursued in the United Kingdom with little regard for the impact that the increased financial load may have on students. According to research conducted at one case-study institution, many students were managing their day-to-day living expenditures more comfortably than they had anticipated in the first year. Those who were in a tough financial situation before the start of their studies, on the other hand, were more likely to suffer challenges during their first year.[6] Cuttilan et al. (2016)[7] discovered that mental health problems impact a sizable number of medical students and that they

are especially frequent in specific subpopulations of medical students. Various findings suggest that preclinical and home-staying students are more vulnerable to depression. More studies should be conducted on this subject. It is believed that using this knowledge, relevant treatments may be created to promote the mental health of medical students.

MATERIALS AND METHODS

Study Design & Setting

A survey study was conducted at Gujranwala Medical College, Gujranwala, for 3 months.

Data Collection and Data Analysis

The data was collected using a structured questionnaire collected from 151 participants, who are undergraduate medical (MBBS) students (first year to final year) of GMC. Information on age, gender, class, and emails was collected along with twenty questions related to stress, nervousness, being upset, daily life restlessness, being irritated, being focused, satisfaction with the lecturing, financial strains, family-related stress, living problems, and career, was collected from the respondents via proforma with permission. For all stress-related questions, the following scale was used: Never, Rarely, Sometimes, Often, and Always. The incidence of each option in terms of frequencies was calculated. SPSS v26 was used for data record and analysis.

RESULTS

Age Distribution

The mean age of the student was 21.38 ± 1.628 years. Most of the students (25.8%) were of age 22 years.

Gender Distribution

There were 53 (35.1%) male and 98 (64.9%) female students.

Students' Professional Years Distribution

20 (13.2%) were first-year students, 35 (23.2%) were second-year students, 7 (4.6%) were third-year students, 67 (44.4%) were fourth-year students and 22 (14.6%) were final year students.

Information on Stress, Nervousness, and Being Upset in Life's Difficulties

Table 1 shows the information on questionnaires asked related to daily life stress, nervousness, and controlling them among the students. In two such questions, the option 'often' was marked by the majority of students. However, options 'sometimes' and 'rarely' were marked by the students in the remaining three questions. Sixty-one subjects (40.4%) felt they had often faced stress during their last month with 37.1% facing unexpected events. 33.1% felt they were unable to deal with the situations, 32.5% felt that things had not gone in the right direction and 29.8% felt the difficulties were escalating beyond coping.

Table 1: Questionnaires related to stress, nervousness, and being upset due to daily life difficulties and overcoming them.

Q1: In the last month, how often have you felt nervous and stressed?

Scale	Frequency	Percentage
Never	4	2.6
Rarely	22	14.6
Sometimes	50	33.1
Often	61	40.4
Always	14	9.3

Q2: In the last month, have you ever felt upset because of something unexpected that happened?		
Scale	**Frequency**	**Percentage**
Never	6	4.0
Rarely	29	19.2
Sometimes	47	31.1
Often	56	37.1
Always	13	8.6
Q3: In the last month, how often have you felt that you were unable to deal with the daily things in your life?		
Scale	**Frequency**	**Percentage**
Never	13	8.6
Rarely	28	18.5
Sometimes	50	33.1
Often	44	29.1
Always	16	10.6
Q4: In the last month, how often did you feel that things were going in the wrong direction?		
Scale	**Frequency**	**Percentage**
Never	13	8.6
Rarely	31	20.5
Sometimes	49	32.5
Often	42	27.8
Always	16	10.6
Q5: In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?		
Scale	**Frequency**	**Percentage**
Never	34	22.5
Rarely	45	29.8
Sometimes	41	27.2
Often	12	7.9
Always	34	22.5

Information on Restlessness, Being Irritated, or Worthless

Table 2 shows the information on questionnaires asked related to feeling restlessness, irritation, or worthlessness in performing daily errands and for future consideration. In three out of five questions, students marked the option 'often'. However, options 'never' and 'sometimes' were marked in the remaining two questions. Often students (34.4%) found restlessness during their last month with 39.1% of subjects feeling irritated by things happening around them. Some 35.8% of subjects had given thoughts to the future, 26.5% felt worthless and 33.1% forgot simple things or tasks during the month.

Information Related to Focus on Studies, Life's Control, Its Problems, and Financial Strains

Table 3 displays data on being focused on taking charge of one's life and problems, dissatisfaction with college lectures, and financial difficulties. Option 'always' was marked by the majority of students in one question whereas, option 'often' was marked in another question. Similarly, in this questionnaire set, the 'rarely' option was marked in only one question. 27.8% of subjects felt they rarely lost control of life. 39.1% felt they had difficulty focusing on the tasks given to them. People who felt they were alone in their problems were 26.5%. With regards to satisfaction with class lectures, 34.4% of subjects often felt dissatisfied. Financial strain was always there in 3.3% and was rarely felt in 33.8% of subjects.

Table 2: Questionnaires related to restlessness, being irritated, and being worthless for performing tasks and for future.

Q6: In the last month, how often have you felt restless?		
Scale	**Frequency**	**Percentage**
Never	10	6.6
Rarely	20	13.2
Sometimes	52	34.4
Often	52	34.4
Always	17	11.3
Q7: In the last month, how often were you irritated by the things happening around you?		
Scale	**Frequency**	**Percentage**
Never	7	4.6
Rarely	19	12.6
Sometimes	49	32.5
Often	59	39.1
Always	17	11.3
Q8: In the last month, how often did you think about the things that will happen in the future?		
Scale	**Frequency**	**Percentage**
Never	8	5.3
Rarely	21	13.9
Sometimes	40	26.5
Often	54	35.8
Always	28	18.5

Q9: In the last month, how often have you felt you are worthless?		
Scale	**Frequency**	**Percentage**
Never	40	26.5
Rarely	34	22.5
Sometimes	34	22.5
Often	25	16.6
Always	18	11.9
Q10: In the last month, how often do you forget the simple things or tasks given to you?		
Scale	**Frequency**	**Percentage**
Never	17	11.3
Rarely	45	29.8
Sometimes	50	33.1
Often	30	19.9
Always	9	6.0

Information Related to Family Problems, Hostel Food/Living, and Fulfilling Parents' Expectations

Table 4 displays data on family issues, hostel food, living, meeting parental expectations, and career stress. In two questions, the option 'rarely' was marked, in two questions the option 'sometimes' was marked, and 'always' was opted in only one question. Family-related problems were always there in 7.3% of subjects while 30.5% rarely faced any problems. 33.1% always felt dissatisfied with the quality of food in the mess as opposed to 15.9% who were never dissatisfied with it. Dissatisfaction regarding accommodation, far from home, was felt rarely (23.8%). 29.8% of subjects felt they were unable to fulfill their parents' expectations while 22.5% felt they were always facing stress about their career.

Table 3: Questionnaires related to being focused on control of life and problems

Q11: In the last month, how often have you felt that you are losing control of your life?		
Scale	**Frequency**	**Percentage**
Never	28	18.5
Rarely	42	27.8
Sometimes	39	25.8
Often	25	16.6
Always	17	11.3

Q12: In the last month, how often have you felt difficulty focusing on the task given?		
Scale	**Frequency**	**Percentage**
Never	5	3.3
Rarely	30	19.9
Sometimes	59	39.1
Often	38	25.2
Always	19	12.6
Q13: In the last month, how often have you felt alone in your problems?		
Scale	**Frequency**	**Percentage**
Never	15	9.9
Rarely	28	18.5
Sometimes	29	19.2
Often	39	25.8
Always	40	26.5
Q14: In the last month, how often have you been dissatisfied with class lectures?		
Scale	**Frequency**	**Percentage**
Never	8	5.3
Rarely	14	9.3
Sometimes	34	22.5
Often	52	34.4
Always	43	28.5
Q15: In the last month, how often did you face financial strain?		
Scale	**Frequency**	**Percentage**
Never	43	28.5
Rarely	51	33.8
Sometimes	40	26.5
Often	12	7.9
Always	5	3.3

Table 4: Questionnaires related to family problems, hostel food/living, fulfilling parents' expectations, and career stress.

Q16: In the last month, how often did you face family-related problems?		
Scale	**Frequency**	**Percentage**
Never	27	17.9
Rarely	46	30.5
Sometimes	36	23.8
Often	31	20.5
Always	11	7.3
Q17: In the last month, how often were you dissatisfied with the quality of food in the mess?		
Scale	**Frequency**	**Percentage**
Never	24	15.9
Rarely	19	12.6
Sometimes	25	16.6
Often	33	21.9
Always	50	33.1

Q18: In the last month, how often have you been dissatisfied with the accommodation far from home?		
Scale	**Frequency**	**Percentage**
Never	31	20.5
Rarely	36	23.8
Sometimes	23	15.2
Often	32	21.2
Always	29	19.2
Q19: In the last month, how often do you feel you are unable to fulfill your parent's expectations?		
Scale	**Frequency**	**Percentage**
Never	29	19.2
Rarely	37	24.5
Sometimes	45	29.8
Often	27	17.9
Always	13	8.6
Q20: In the last month, how often have you been stressed about your career?		
Scale	**Frequency**	**Percentage**
Never	17	11.3
Rarely	23	15.2
Sometimes	42	27.8
Often	35	23.2
Always	34	22.5

DISCUSSION

The present study gave a deeper knowledge of the prevalent reasons for felt stress among medical students, which impacted their performance. The research also assisted in identifying common factors impacting stress levels among undergraduate medical students, as well as their function in creating emotional weariness and burnout. To determine a student's performance, the frequency of stress and emotional weariness, as well as the contributing factors, should be evaluated regularly. Therefore, we surveyed undergraduate medical students to determine the factors associated with increased stress and emotional tiredness among medical students at Pakistan's Gujranwala Medical College (GMC). Participants students' average age was 21.381.628 years. 35.1 percent of the pupils were male, while 64.9 percent were female. 40.4 percent of students said they had been stressed frequently in the previous month, with 37.1 percent experiencing unexpected situations. During the previous month, 34.4 percent of students reported feeling restless, with 39.1 percent reporting being irritated by what was going on around them. During the month, 35.8% of participants had turned their thoughts to the future, 26.5 percent felt worthless, and 33.1 percent had forgotten simple activities or tasks. 39.1% said they had trouble focusing on the tasks they were assigned. In 3.3 percent of the subjects, financial stress was constantly present, while in 33.8 percent, it was only occasionally felt.

Medical students in China suffer from significant depression and anxiety as a result of harsh circumstances such as protracted schooling, academic strain, and clinical practice stress. The mean prevalence of depression among Chinese medical students was 32.74 percent, whereas the mean prevalence of anxiety was 27.22 percent. Individual characteristics, societal and economic issues, and environmental factors were all identified as predictors of depression and anxiety. More precautions should be made to protect at-risk medical students based on the risk indicators revealed[8] (Mao et al. 2019). Depression, anxiety, and stress afflict a sizable number of Indian undergraduate medical students. To address their concerns and make mental health treatment easily available to them, systemic initiatives are required. It has been stated that the vicissitudes and strains of medical education in India differ from those in the Western world.[9] In a meta-analysis, researchers discovered that the prevalence of anxiety among medical students worldwide was 33.8 percent, which is much greater than the general population. Anxiety has serious consequences for both the medical student (a future physician) and the patients. When students are agitated and apprehensive, administrators and leaders of medical schools should take the lead in destigmatizing mental diseases and promoting help-seeking behaviors.[10]

Ren et al. (2021) focused on essential core symptoms such as "fatigue," "worthlessness," and "irritable," as well as critical bridging symptoms

such as "depressed or sad mood" and "irritable." Because of their highest connections with suicidal thoughts, "psychomotor agitation" and "feeling of worthlessness" were highlighted as significant priorities. The implications of these symptoms for clinical prevention and intervention are highlighted. It is typical for depression and anxiety disorders to coexist.[11] Promoting positive well-being and improving life satisfaction may be one approach to reducing depression and anxiety symptoms among university students. The findings highlight the need for evidence in building frameworks for identifying and prioritizing therapies for students suffering from mood disorders and unhappiness with life. A study measured life satisfaction among undergraduate medical and other students in Auckland to look for links to depression and anxiety disorders. A substantial number of the students polled in this study suffer from clinically serious sadness and anxiety. Promoting positive well-being and increasing life satisfaction may improve university students' quality of life as well as their social and academic success.[12]

The financial factors tend to contribute to poor mental health in students rather than mental health problems contributing to a worsening financial condition. However, there appears to be a bidirectional association between financial issues and global mental health and alcoholism, with money hurting mental health and vice versa, implying the development of a vicious cycle. These findings should be taken into account by professionals who provide health or financial advice to students.[13] Financial and academic concerns were the most commonly mentioned stressors among students. Instead of avoiding, students used active coping mechanisms. Students should be advised on how to handle and cope with stress.[14] A study's population comprised of undergraduate medical students and medical professors from eight medical colleges in Bangladesh. According to the study, the majority of students faced institutional-related difficulties, specifically cleanliness of campus (45.6 percent), unclean toilet (72%), poor quality canteen (63%), poor games facilities (75%), insufficient hostel accommodation (65.2 percent), unclean hostel (63.5 percent), insufficient recreation facilities in the hostel (68.5 percent), and irregular hostel supervision by the authority (57.6 percent).[15] Medical students who believe their parents want them to pursue a prominent job following family or cultural standards may be more conflicted about their career choice after they enter medical school. They may also be more prone to long-term fatigue, but there is little evidence that they perform worse academically.[16] Shah et al (2010)[17] reported that the students reported a higher degree of felt stress. Academic and psychological areas were identified as the primary pressures. More research is needed to evaluate the relationship between stressed patients and gender, academic pressures, and psychosocial stressors. In the present study students reported under the option ‘always’ that 33% felt tension due to mess food and 26.5% felt that they are alone to deal with their problems.

CONCLUSION & RECOMMENDATIONS

The study's findings will aid in identifying the most influential factors and environments that contribute to the prevalence of mental stress and emotional exhaustion among undergraduate medical students worldwide and eventually helped in eliminating these factors, resulting in a solution to the problem under discussion. Our study showed that around up to at least 40% of students are experiencing different stress and emotional exhaustion due to extreme study pressure and other several factors contributing to it. 27 – 39% of students selected the option of ‘sometimes’ with the stress, anxiety-related questions, followed by the option ‘often’ (34 – 40%). Further study should expand on our local findings to identify anxiety risk factors in medical students in their particular socio-cultural contexts

so that effective screening tools to detect and support afflicted medical students may be established. Based on the findings of the study, it was advised that the relevant authorities evaluate the findings and take some substantial actions to provide long-term answers to the students' challenges.

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Additional Information

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In compliance with the ICMJE uniform disclosure form, all authors declare the following:
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AUTHORS CONTRIBUTIONS

Sr.#	Author's Full Name	Intellectual Contribution to Paper in Terms of:
1.	Kauser Aftab Khan	1. Study design and methodology.
2.	Hareem Arif	2. Paper writing and data calculations.
3.	Huma Azeem	3. Data collection and calculations.
4.	Umama Nadeem	4. Analysis of data and interpretation of results etc.
5.	Ahmed Mustafa	5. Literature review and referencing.
6.	Salah-ud-Din Khan	6. Analysis of data and quality insurer.