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Insights Into Mental Health, Lifestyle Patterns, and Academic Attitudes among Medical Students: A Cross-Sectional Analysis

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Abstract: ***Medical students are more likely to be affected by mental health conditions due to their academic pressure. So, it is very important to have up-to-date information about it.***
Methods: ***A descriptive cross-sectional study was conducted with 406 randomly selected medical students. Participants gave informed verbal consent, and data collection was done through face-to-face interviews. Quality control measures were in place, and data confidentiality was ensured. Participants had the right to withdraw without providing a reason. Data analysis was performed using SPSS version 25.0, with results presented using descriptive and inferential statistics.***
Results: ***Respondents of the current study were between 18 to 27 years with a mean age of 22.7±1.8 years. The majority 249(61.3%) were Muslim and 349(85.9%) were single. Of the students, 214(52.7%) had psychological distress and a significant 296(72.9%) respondents had a positive attitude towards medical education but 223(54.9%) of them thought that their current study was not enough. Near cent 368(90.7%) had normal mental health before medical admission. Around 191(47.1%) students had no general anxiety disorder and only 27(6.7%) were required to have mental health services. A significant 256(63.1%) respondents consume good food quality and around half 183(45.1%) were non-smokers. Near one-fourth 96(23.6%) had a sedentary lifestyle. The majority 284(69.9%) of respondents maintain a good relationship with their Only 148(36.5%) had a low level of emotional exhaustion.***
Conclusion: ***Medical students were suffering from psychological distress. Students' mental health conditions were good before admission to medical college and some of them were***

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required to have mental health services. Students were suffering from different types of mental health conditions. Students usually consume healthy and good-quality food while most of them are non-smokers. The majority of respondents had an active lifestyle and also good relations with their parents. A significant number had low levels of emotional exhaustion.

Keywords: Medical Students, Psychological Distress, Mental Health Issues, General Anxiety Disorder, Emotional Exhaustion, Lifestyle Patterns.

1. INTRODUCTION

The life of medical students is quite stressful because of their academic journey. Studies show that medical students are especially prone to experiencing challenges with their mental well-being, facing higher rates of mental illness and psychological distress compared to the general population [1]. Medical students and physicians usually face higher rates of mental health problems which include issues like anxiety, depression and breakdown compared to non-medical students. These challenges not only affect personal well-being but also impact care for the patients through decreased empathy and unprofessional behaviours [2]. Various studies have investigated factors that contribute to the mental health challenges faced by medical students. These study reports mentioned extreme workload, professional competition, reduced sleep duration, lack of support from society, and patient suffering and death. These factors can significantly impact students' stress levels and overall mental well-being [3]. Medical education's specific pathogenetic factors lead to higher stress-related illnesses like depression and burnout in students compared to their peers in other fields or employment [4]. Medical students often avoid seeking mental health care despite the clear need for it. Concerns about privacy, stigma, and potential negative impacts on their careers deter many from seeking help. This avoidance due to stigma-related barriers may lead to increased distress and drained among future practising physicians [5]. Medical school and early career stages for doctors are highly stressful, leading to risks like anxiety, burnout, depression, and alcohol abuse. Even before graduation, students experience significant distress, surpassing peers in their age group. These challenges stem from the combined pressures of academics and personal life [6]. In mental health research, this shift would move away from simply assessing the presence or absence of psychological distress to a more comprehensive evaluation. This broader approach considers not only distress but also factors like psychological well-being and coping strategies to determine a person's mental [7]. This is very important to evaluate the mental health condition of each individual especially who are in the field of medical science because of their tremendous workload. Because of such requirements, current research was conducted.

2. RELATED WORK

Medical students are especially susceptible to experiencing stress, anxiety, and depression. Recent research has highlighted significant rates of mental health issues among medical trainees globally. Recent research involving 129,123 medical students from 47 countries

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found high rates of stress-related issues. Around 27.2% showed symptoms of depression, with 11.1% reporting suicidal thoughts [8]. Research has consistently highlighted poor mental health among medical students in various Asian countries such as India, Pakistan, Iran, Malaysia, China, and Saudi Arabia. This includes issues like serious contemplation of dropping out of medical school, substance abuse, burnout, and suicidal thoughts, emphasizing the significant challenges faced by students in these regions [9]. Medical education is often seen as stressful, leading to issues like anxiety, depression, and burnout due to heavy workloads, frequent testing, and increasing patient responsibilities. Longitudinal studies indicate a worsening trend in mental health and well-being during medical training [10].

3. MATERIALS AND METHODS

A descriptive cross-sectional study was conducted among 406 randomly selected medical students in Bishkek, Kyrgyzstan. Participants were chosen through random selection methods within the student population. Before data collection, informed verbal consent was obtained from each participant, ensuring ethical standards were met. Data collection was carried out by the principal investigator using a pretested interview schedule through face-to-face interviews, ensuring privacy and data quality. Quality control measures included checking questionnaires for completeness, consistency, correctness, and discrepancies. Confidentiality of collected data was maintained throughout the study. Participants were informed of their right to withdraw from the study at any time without providing a reason. No physical, social, or psychological risks were associated with the study procedure. Data analysis was performed using SPSS version 25.0, employing descriptive statistics such as frequency, percentage, mean, and standard deviation. Inferential statistics, specifically the Chi-Square test, were used where appropriate. Results were presented using tables and diagrams for clarity and understanding.

4. RESULTS AND DISCUSSION

The age range of the respondents was 18 to 27 years, while a majority of 288(70.9%) of the students were in the age group 20 to 24 years with a mean age of 22.7±1.8 years. In terms of gender distribution, 212(52.2%) were male, while 194(47.8%) were female. Of 406 medical students, the religion of 249(61.3%) were muslim while 151(37.2%) were hindu and 6(1.5%) were Buddhist. Marital status indicated that a significant 349(85.9%) were single, while 57(14.1%) were married. Regarding type of family, it was revealed that 284(69.9%) had nuclear family and 122(30.1%) had Extended Family. Of the students, 354 (87.2%) of students opined that their family's economic status was good while 52(12.8%) had poor economic status. The majority 233(57.4%) of students were from private medical colleges and 173(42.6%) from state medical.

A significant number 214(52.7%) had psychological distress while 192(47.3%) had no psychological distress. Near three-fourth 296(72.9%) had a positive attitude towards choosing medical education and 110(27.1%) had no opinion or negative attitude about it. The majority 223(54.9%) respondents revealed that their study was not sufficient, 97(23.9%) opined sufficient and 86(21.2%) had no opinion about it. Of them, 38(9.3%) had mental health issues

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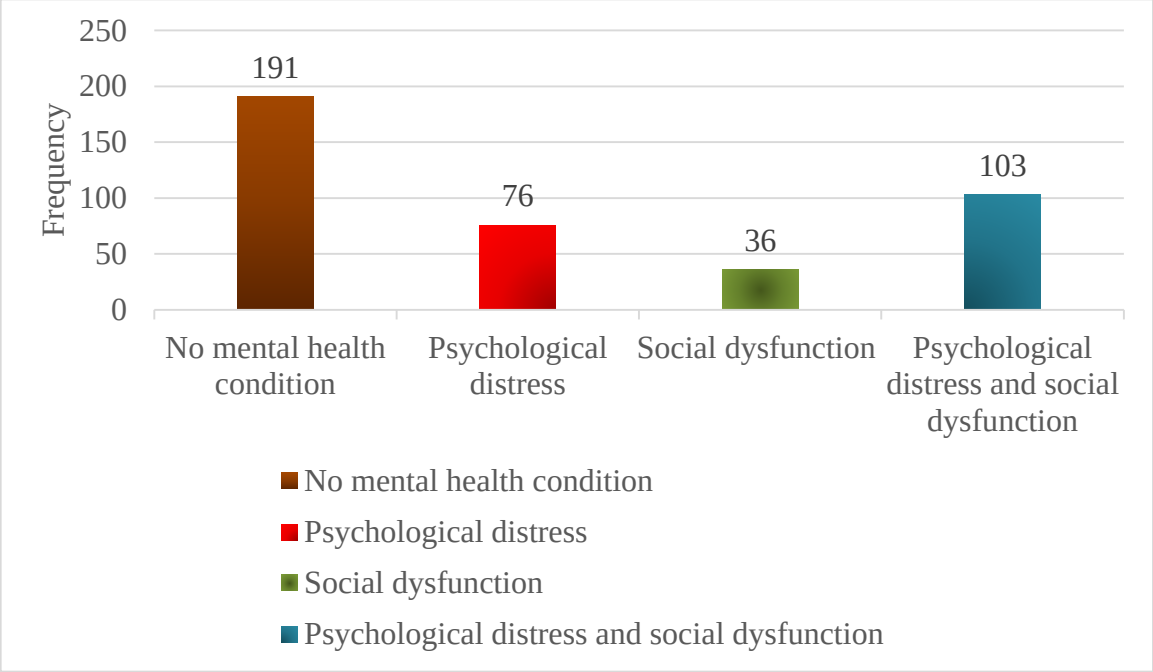
before admission while 368(90.7%) had normal mental health. Only 27(6.7%) had received mental health services and nearly cent 379(93.3%) were not required to have mental health services. Around half 191(47.1%) of respondents had no general anxiety disorder, 166(40.9%) had mild while 28(6.9%) had moderate and 21(5.1%) had severe anxiety disorder (Table 1).

Table 1: Respondents by General Anxiety Disorder (GAD)

General Anxiety Disorder (GAD)	Frequency	Percentage
No GAD	191	47.1
Mild GAD	166	40.9
Moderate GAD	28	6.9
Severe GAD	21	5.1
Total	**406**	**100.00**

Regarding current mental health disturbance, 191(47.1%) had no mental health condition, 76(18.7%) had psychological distress, 36(8.9%) had social dysfunction and 103(25.3%) had both psychological distress and social dysfunction (Fig 1).

Fig 1: Respondents by current mental health disturbance.



Near two-thirds, 256(63.1%) had good food quality and 150(36.9%) had average quality food. Among the student, 168(41.4%) consume unhealthy diet, 131(32.3%) had average food and 107(26.3%) consume healthy food. Majority of respondents 183(45.1%) were non-smokers, 96(23.6%) were Occasional smoker and 127(31.3%) were daily smokers (Table 2).

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Table 2: Respondents by smoking status

Smoking status	Frequency	Percentage
Never	183	45.1
Occasional	96	23.6
Daily	127	31.3
Total	**406**	**100.00**

Around one-fourths of medical students, 96(23.6%) had sedentary lifestyle, 125(30.8%) had moderate physical activity and 185(45.6%) had active lifestyle. A significant number 284(69.9%) had good relationships with their parents, 94(23.2%) had average relations and 28(6.9%) had poor relations with their parents. More than one-third 148(36.5%) had a low level of emotional exhaustion, 184(45.3%) had moderate and 74(18.2%) had a high level of emotional exhaustion. Regarding the association, it was found that among the medical students, there is a statistically significant association ($p<0.005$) between psychological distress and physical activity (Table 3).

Table 3: Association between psychological distress and physical activity

Psychological distress	Physical activity			Total n (%)	P value
	Sedentary	Moderate	Active		
Yes	74	109	31	214(100)	<0.005
No	22	16	154	192(100)	
Total	96	125	185	406(100)	

Discussion

Respondents of current study were between 18 to 24 years with a mean age of 21.3±0.9 years. This is consistent with the findings of Baj-Korpak J *et al.*, where 56.1% of the medical students were between 21 to 30 years old [11]. Regarding gender, 212(52.2%) were male, while 194(47.8%) were female. This is inconsistent with the study findings of Xiong P *et al.*, where 30.55% were male and 69.45 were female which may be due to the small sample size, and purposive selection of the study group [12]. More than two-fourths of the current study were 349(85.9%) single which is corroborated by the findings of Hanani A *et al.*, where the majority 99.1% were single [13]. More than two-thirds 284(69.9%) of respondents had nuclear family. This is vindicated by the findings of the study conducted by Hu B *et al.*, where 86.1% had a Nuclear family[14]. In this study, 354 (87.2%) of students but 52(12.8%) families had poor economic conditions. This is vindicated by findings of the study conducted by Carletto S and associates where the majority 94.1% had good economic status [15]. In this study, around two-fifths of 173(42.6%) were students of state medical and 233(57.4%) from private medical colleges. This is substantiated by findings of a study conducted by Zila-Velasque JP and team where 35.1% were studying in the state and 64.9% were from private medical colleges [16]. Of the respondents, around half 214(52.7%) were suffering from psychological distress but 192(47.3%) were not. This is corroborated by the findings of Sahu PK *et al.*, where they found that the prevalence of psychological distress was 51% [17]. In the present study, 296(72.9%) had a positive attitude towards choosing medical education and 110(27.1%) had no opinion or negative attitude towards it. This is more or less similar to the

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findings of Carletto S and team where more than two-thirds 67.6% had positive and the rest 32.4% had negative/no opinions about it [15]. Of students, more than half 223(54.9%) opined that their study was sufficient and 97(23.9%) were not satisfied while 86(21.2%) had no opinion about it. This is dissimilar to the findings of Karabacak M *et al.,* where 26.73% thought their study was sufficient while 52.48% were not but 20.79% were unsure about it. This difference might be attributed to variations in study area and in sample size 18]. The majority 368(90.7%) had normal mental health before medical college admission and only 38(9.3%) had mental health issues during pre-admission time. This is corroborated by the findings of Wainipitapong S *et al.,* where 96.8% had normal mental health conditions and 3.2% had mental health issues during Pre-admission [19]. Among the study respondents, 379(93.3%) of the respondents need not have mental health services and only 27(6.7%) received mental health services. This is corroborated by the findings of Kihumuro RB *et al.,* who found that the majority 86.73% not receive mental health services while only 13.27% need to have such services [20]. Regarding General Anxiety Disorder(GAD) , of respondents 191(47.1%) had no GAD, 166(40.9%) had mild, 28(6.9%) had moderate and only 21(5.1%) had severe disorder. This is substantiated by findings of a study conducted by Christophers B and team, where 42% had no GAD, 38% had mild, 13 had moderate and only 7% had severe GAD [21]. Regarding current mental health disturbance, 191(47.1%) had no mental health condition, 76(18.7%) had psychological distress, 36(8.9%) had social dysfunction and 103(25.3%) had both psychological distress and social dysfunction. This is supported by the findings of Wiguna T *et al.,* where 50.9% were currently mentally healthy, 12.8% had psychological distress, 15.9% had social dysfunction but 20.4% opined to both have psychological distress and social dysfunction [22]. A significant number 256(63.1%) had good food quality and 150(36.9%) had the average quality of food. This is vindicated by findings of the study conducted by Kobbaz TM and team, where more than half 55.4% had good quality eating while 44.5% had poor quality [23]. Of students, 168(41.4%) consume unhealthy diet, 131(32.3%) had average food and 107(26.3%) consume healthy food. . A study conducted by Terebessy A *et al.,* found nearly similar results where 33.2% consumed unhealthy diets, 51.6% had average diets and only 15.3% consumed a healthy diet [24]. Of respondents, 183(45.1%) were non-smokers, 96(23.6%) were occasional smoker and 127(31.3%) were daily smokers. This is supported by findings of the study conducted by Popescu CA *et al.,* where 56.1% never smoked, 19.3% were occasional smokers and nearly one-fourth 24.6% smoke daily [25]. Around half 185(45.6%) had active lifestyle, 125(30.8%) had moderate activity and 96(23.6%) had sedentary lifestyle. This is in line with the study findings of Terebessy A *et al.,* where only 11.8% were inactive, 13.2% were moderately active and 75.0% were active [24]. Regarding relationships with the parents, 284(69.9%) had good relationships with their parents, 94(23.2%) had average relations and 28(6.9%) had poor relations with their parents. This is substantiated by findings of the study conducted by Gui Z *et al.,* where 80.5% had good relations with their parents and 19.5% did not have that much good relationship with their parents [26]. Of the study respondents, 148(36.5%) had a low level of emotional exhaustion, 184(45.3%) had moderate and 74(18.2%) had a high level of emotional exhaustion. This is vindicated by findings of the study conducted by Pitanupong J and team where 14.9% had a low level of emotional exhaustion, 22.0% had moderate, 62.8% had a high level of Emotional exhaustion and 0.3% had no answer about it [27].

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5. CONCLUSION

Medical students were mostly Muslim single males from nuclear families with good economic status studying in private medical colleges. Respondents were suffering from psychological distress. Students had positive attitudes about medical education and their pre-admission mental health was good but not satisfied with their current study. Students were suffering from mental health conditions but little had received mental health services. Students consume healthy and good quality food while most of them are non-smokers and have an active lifestyle. Respondents had a good relationship with their parents and suffered from low levels of emotional exhaustion.

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