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Research Article

**A PSYCHOLOGICAL STUDY ON MEDICAL STUDENTS  
REGARDING CAUSES AND PREVALENCE OF MENTAL  
STRESS**<sup>1</sup>Marium Choudhary, <sup>2</sup>Dr. Mehreen Ejaz, <sup>3</sup>Dr Aqsa Aslam<sup>1</sup>MBBS, Rawalpindi Medical College, Pakistan<sup>2</sup>King Edward Medical University Lahore<sup>3</sup>CMH lahore**Abstract:**

**Objective:** To know the prevalence of stress and depression among MBBS students in Pakistan and to find its relation with year, performance and daily activities.

**Methods:** 600 students participated in this study from Allied Hospital Faisalabad, College of Medicine. They belonged to all 5 years of MBBS, students from different years were randomly selected. Kessler 10 stress inventory was filled by all students.

**Results:** 494 students responded, thus 83% was response rate. 19.6% students had severe stress while 57% had mild to moderate stress. Relation between year of undergraduate studies and stress was highly significant. Statistical significance of relation of stress with educational performance couldn't be concluded as stress prevalence between all 4 years was highly dissimilar. The causes of mental stress were also inquired. Studies was the major factor (60.3%), home related factors were present in 2.8%, 36.9% cases couldn't explain any cause behind their stress.

**Conclusion:** It was noticed that the stress prevalence during first three years of medical studies was common, better students' service structure must be defined in order to avoid such issues. Studies related stress was commonly observed thus, better opportunities should be provided where students can discuss their studies related problems.

**Keywords:** Stress, medical students, causes, prevalence.

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**INTRODUCTION:**

Medical studies and profession is considered one of the most stressful fields. Due to heavy training hours and hectic study schedules students can barely spare some time for their hobbies and daily activities. Their family and social relations are disturbed leading to more prevalence of stress among students and workers. Besides that, patient management and recovery, studies difficulty level etc. are the other major causes of stress associated with medical field [1, 2]. Symptomatic stress and depression has been reported widely across the globe. Many surveys have been conducted so far, due to higher prevalence of mental distress among medical studies it is need of the hour to introduce improved service and studies structure for medical professionals and students. The prevalence rate is higher during earlier years of undergraduate program and successively reduces while we proceed to final year. This clearly depicts that proper students' counsellors must be available in medical colleges or a suitable forum must be provided where students can share their problems and can get help regarding managing studies related issues [3,4,5].

**METHODOLOGY:**

Various measures had been brought in action in order to lessen mental stress among medical students. Depressive inventory and general Health questionnaire were used. Besides these a few other tools were also used. Kessler 10 score was used to measure depression. Level of mental distress is measured by using this score without any educational level or gender biasness. Symptoms of distress can be measured by using this score during population surveys. Kessler 10 score contains 10 questions. Scoring is between 2 to 5. Less than 20 score is

considered normal. Mild disease is indicated by score between 20 to 24. 25 to 29 shows moderate stress. Severe stress has score between 30 to 50. Author's instructions were followed while using this coding.

Kessler 10 Arabic version self-administered questionnaires were given all students. Response was collected a month before examinations. A few more related questions in order to figure out cause of mental distress were also added like, history of any illness in near past, academic record, home situation etc. Thorough communication was arranged between students and researchers in order to develop better understanding of measuring tool and purpose of study. Students' identity was kept in secret and this thing was ensured to all participants. Response was recorded only after informed written consent. Study was reviewed and finally approved by research ethical board. SPSS version 12 was used for statistical analysis. Statistical tests were applied. Prevalence of outcome variable was carried out with 95% confidence interval.

**RESULTS:**

494 students, out of 600 responded, 83% response. 21.4±1.9 years was mean age of participants. Stress prevalence was 57%. Severe stress was noted in 19.6% population. Year wise stress distribution was recorded. It was observed that stress was more prevalent in earlier year of MBBS, 74% in first year, 69.8% in second year, 48.6% in third year, 30.4% in fourth year and 49% in final year of MBBS. Relation between year of studies and stress was statistically significant. Result obtained from all data collected and its statistical significance is summarized in tables.

Table1: Severity of stress.

No stress	43.1%
Mild	21.5%
Moderate	15.8%
Severe	19.6%

Table2 Variables of study population.

Study Variables	Prevalence (%)
Academic level (years)	
1 <sup>st</sup>	120(24.3)
2 <sup>nd</sup>	106(21.5)
3 <sup>rd</sup>	148(29.9)
4 <sup>th</sup>	69(14)
5 <sup>th</sup>	57(10.3)
Grades	
Excellent	224(51)
Very good	111(25.3)
Good	76(17.3)
Poor	28(6.4)
Regular to academic course	
Yes	432(90)
No	48(10)
Physical problems	
Absent	267 (59.3)
Mild to moderate	158 (35.9)
Severe	25 (5.5)

Table3 association of stress with year of study.

Year	Number	Percentage	Number	Percentage	Odds ratio	95% CI or OR
	No		Yes			
1 <sup>st</sup>	31	25	89	74	6.4	3.2-13.1
2 <sup>nd</sup>	32	30	74	69	5.2	2.5-10.6
3 <sup>rd</sup>	76	51	72	48	2.4	1.2-4.5
4 <sup>th</sup>	47	69	21	30	1.0	
5 <sup>th</sup>	26	51	25	49	2.1	0.9-4.9

Table 4 Association between stress and study variables.

Study variable	Stress prevalence	Percentage	Stress prevalence	Percentage	Odds ratio with 95% CI
	No		Yes		
Grades*					
Excellent	91	40.6	133	59	1.2(0.5-3.1)
Very good	54	48.6	57	51	1.7(0.7-4.4)
Good	32	42.1	44	57	1.3(0.5-3.5)
Poor	10	35.7	18	64	1.0
Regular to studies**					
Yes	187	43.3	245	56	1.39(0.7-2.7)
No	17	35.4	31	64	1.0
Physical problems***					
Absent	130	48.7	137	51.3	1.0
Mild to moderate	43	27	115	72.8	2.5(1.6-3.9)
Severe	8	32	17	68	2.0(0.8-5.3)
X2 value	P value				
2.57*	0.46*				
0.78**	0.37**				
19.78***	<0.0001***				

**DISCUSSION:**

A systematic review of various studies was done by Sarkar S, et al. in which the pooled prevalence of stress, anxiety and depression was calculated it turned out to be 51%, 39% and 35% respectively. Females suffered mental distress more commonly as compared to males [8]. A similar study was conducted on medical Fayoum university students in 2017 in which 442 students participated and the prevalence of stress, anxiety and depression was 62%, 64% and 60%, respectively [9]. Several other research studies had been done in order to figure out the causes of high prevalence of mental distress among medical students so that suitable coping strategies can be introduced [6,7].

Symptomatic stress and depression has been reported widely across the globe. Many surveys have been conducted so far, due to higher prevalence of mental distress among medical students it is need of the hour to introduce improved service and studies structure for medical professionals and students. The prevalence rate is higher during earlier years of undergraduate program and successively reduces while we proceed to final year. This clearly depicts that proper students' counsellors must be available in medical colleges or a suitable forum must be provided where students can share their problems and can get help regarding managing studies related issues.

**CONCLUSION:**

It was noticed that the stress prevalence during first three years of medical studies was common, better students' service structure must be defined in order to avoid such issues. Studies related stress was commonly observed thus, better opportunities should be provided where students can discuss their studies related problems.

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