

PSYCHOLOGICAL DISTRESS AMONG UNDERGRADUATE MEDICAL STUDENTS OF PESHAWAR, PAKISTAN

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ABSTRACT

Objective: To find out the level of psychological distress among medical students of Peshawar.

Methodology: This cross-sectional study included undergraduate medical students of Peshawar, Pakistan. Kessler psychological distress scale (K10) questionnaire was used to assess the level of psychological distress in students. The questionnaire consisted of 10 questions with five response options i.e., none of the time (1) to all of the time (5). The scores between 10 to 19 indicates a person to be well, 20-24 indicates that there is likelihood of having mild psychological distress, 25-29 for having moderate and 30-50 for having severe psychological distress. Data analysis was carried out using SPSS v.20 and a p value of <0.05 was considered significant when tests of significance were applied.

Results: The mean age of the sample (n=1284) was 20.7 ± 1.6 years with majority of female students (n=714, 55.6%). The response rate was 92%. The Cronbach's alpha reliability of K10 in our study was 0.839. The results showed that 281 (21.9%), 341 (26.6%) and 319 (24.8%) students had mild, moderate and severe psychological distress, respectively. Females had significantly higher levels of psychological distress as compared to male students (p =0.000). There was no significant difference in the level of psychological distress in the students of private and public sector medical colleges (p =0.320).

Conclusion: Three out of every four students are experiencing psychological distress which need to be addressed to help them improve their efficiency in academics and to enhance their overall psychological and physical health.

Key Words: Stress, Kessler psychological distress scale, Undergraduate, Medical students

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INTRODUCTION

Stress is a commonly used term to describe pressure in diverse settings, which is considered positive until a certain limit, for performing well and achieving goals. However, when this pressure exceeds the limit, the result is a pathological stress¹. In general, medical education is being perceived as stressful². Medical students have been suggested to have a high level of stress during their undergraduate course³. In the fast-paced, competitive world of today, many people consider stress to be a part of life but high level of stress may negatively affect the learning and cognitive function of an undergraduate medical student⁴.

Distress has also been linked to forthcoming health problems in medical students and might affect their ac-

ademic achievements⁵. However, students seldom seek help for such problems⁶. Several studies have reported high rates of psychological morbidity such as anxiety and depression in medical students^{2,4,7}. These psychological morbidities have been attributed to heavy workload, fear of failing in the examinations and lack of time for co-curricular and extra-curricular activities⁸.

Since medical students are considered to be under continuous stress and prolonged stress disturbs the natural ability to cope with ordinary situations⁹, therefore, this study was planned to find out psychological distress among medical students of Peshawar using Kessler psychological distress scale (K10), and compare the frequency between public and private sector medical students.

METHODOLOGY

A cross-sectional study was conducted from January to March 2017. The sample included medical students studying in different medical colleges of Peshawar, Pakistan, using purposive sampling. All students from first to final year were invited to fill the questionnaire. The study included students from Peshawar Medical College, Rehman Medical College, Kabir Medical College, Khyber Girls Medical College and Khyber Medical College. The Ethical Review Committee of Peshawar Medical College, Peshawar, approved the study. Each participating institute was approached for permission, before starting data collection. Informed consent was taken from all the participants before providing them with the questionnaire. The data was collected eight weeks before any major examination, to avoid the confounding effects of examination stress on the responses of the students.

Kessler psychological distress scale (K10) has been used to assess psychological distress in population-based epidemiological studies¹⁰. The K10 consists of 10 questions. Each question has five possible (scored from 1-5) responses from "none of the time" to "all of the time". A total score of less than 20 is considered to show no stress while a score of 20-24; 25-29; and 30-50 represents mild, moderate and severe stress, respectively¹¹.

Data analysis was carried out using SPSS v.20. Demographic variables were analyzed to find out the fre-

quencies and percentages. Chi-square test was used to find out the differences based on gender, institutions and year of education on stress levels. The results were considered significant at $p < 0.05$ level.

RESULTS

A total of 1400 students were asked to participate in the study. The response rate was 92%. The mean age of the sample ($n=1284$) was 20.7 ± 1.6 years with majority of female students ($n=714$, 55.6%).

Majority of the students were from private sector institutes ($n=864$, 67.3%). A total of 374 (29.1%) students of Rehman Medical College, 264 (20.6%) of Peshawar Medical College, 231 (18%) of Khyber Medical College, 226 (17.6%) of Rehman Medical College and 189 (14.7%) of Khyber Girls Medical College were part of the study sample. The Cronbach's alpha reliability of K10 in our study was 0.839. The results showed that 281 (21.9%), 341 (26.6%) and 319 (24.8%) students fall in the categories of mild, moderate and severe psychological distress respectively. The details are given in Table 1.

The results showed that females had significantly more psychological distress as compared to male students ($p = 0.000$). There was no significance difference in the level of stress in students of private and public sector medical colleges ($p = 0.320$) while least percentage of students of final year showed to have no stress, as compared to other years of education ($p = .002$). Further details are given in Table 2.

Table 1: Demographic details of the sample (n=282)

S. No.	Variables	Frequency (Percentage)	
1	Gender	Male	570 (44.4%)
		Female	714 (55.6%)
2	Institutions	Private Colleges	864 (67.3%)
		Public Colleges	420 (32.7%)
3	Year	1st Year	350 (27.2%)
		2nd Year	382 (29.8%)
		3rd Year	267 (20.8%)
		4th Year	231 (18.0%)
		5th Year	54 (4.2%)
4	K10 Scale	No Stress	343 (26.7%)
		Mild Stress	281 (21.9%)
		Moderate Stress	341 (26.6%)
		Severe Stress	319 (24.8%)

Table 2: Details of participants and their presenting physical and psychological complaints

Variables		No Stress	Mild Stress	Moderate Stress	Severe Stress	P Value
Gender	Male (n=570)	179 (31.4%)	128 (22.4%)	152 (26.7%)	111 (19.5%)	.000
	Female (n=714)	164 (23.0%)	153 (21.4%)	189 (26.5%)	208 (29.1%)	
Colleges	Private (n=864)	228 (26.4%)	202 (23.4%)	224 (25.9%)	210 (24.3%)	.320
	Public (n=420)	115 (27.4%)	79 (18.8%)	117 (27.8%)	109 (26.0%)	
Year	1st Year (n=350)	96 (27.4)	84 (24.0%)	87 (24.9%)	83 (23.7%)	.002
	2nd Year (n=382)	105 (27.5%)	94 (24.6%)	98 (25.7%)	85 (22.2%)	
	3rd Year (n=267)	69 (25.9%)	58 (21.7%)	82 (30.7%)	58 (21.7%)	
	4th Year (n=231)	63 (27.3%)	34 (14.7%)	67 (29.0%)	67 (29.0%)	
		10 (18.5%)	11 (20.4%)	7 (13.0%)	26 (48.1%)	

DISCUSSION

This research used K 10 to assess different levels of psychological distress among medical students. K10 is psychometrically reliable enough to be used to measure psychological distress, as it possesses excellent values of Cronbach's alpha reliabilities. The Cronbach alpha reliability of the K10 in our study was 0.839, which is similar to other studies showing Cronbach's alpha value of 0.89, 0.91 and 0.919¹²⁻¹⁴.

The prevalence of psychological distress among medical students in our study showed higher levels on moderate values followed by severe values. Our research finding was supported by the findings of other researches that had similar findings^{13,15,16}. On the contrary, the findings of other studies have showed that students had shown more severe stress levels^{3,17}.

The finding of our research showed that female students had higher levels of psychological distress as compared to male students. We can find similar findings from some other studies that showed that female students were having a higher stress level as compared to male students¹⁸⁻²¹. However, the study of Huang et al²² showed some contradictory finding to the findings of our study, and reported to have no gender difference in term of stress. Our research study found no difference in the stress level among medical students of private and public sector. However, to our knowledge, no study has compared the stress between public and private sector medical students.

Our research found that majority of final year students showed stress but the finding was not suggestive of regular progression of stress from first to final year

and showed irregular pattern. This is in contrast with the findings with the study of Kulsoom et al²⁰, which showed that stress increased with increasing years in MBBS program. Ludwig et al²³ reported that perceived stress was highest in third year. The results of the study by Qamar et al¹⁸ showed that relationship between stress and academic year was insignificant.

CONCLUSION

Three-fourth of the undergraduate medical students experience psychological distress. This is an alarming situation, which needs to be addressed. In this context, in-time assessment and appropriate management is need of the day to enhance the academic performance of medical students.

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CONTRIBUTORS

MA conceived the idea, did data collection and helped in the write up of the study. MRS did statistical analysis and helped in the write up of the study. MI planned the study, critically revised the manuscript and supervised the study. All authors contributed significantly to the submitted manuscript.