



## A STUDY TO ASSESS PSYCHOLOGICAL DISTRESS AMONG STUDENTS FOR PREPARING FOR MEDICAL ENTRANCE EXAM

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### ABSTRACT

**Introduction:** Psychological distress encompasses emotional suffering like stress, anxiety, and burnout. In the competitive pursuit of medical college admission in India, twelfth-grade scores and entrance exam rankings mark a challenging journey for students and families.

**Material and Methods:** A cross-sectional study was conducted to assess psychological distress among students preparing for medical entrance exams. The study was carried out at selected coaching centres in Jalandhar, Punjab. A total of 100 students were included using the convenience sampling technique. Data were collected through interviews, which included socio-demographic profiles and Five-point Likert scale, specifically Kessler's Psychological Distress Scale. This scale consisted of 10 questions with responses ranging from "All of the time" (5) to "None of the time" (1), resulting in minimum score of 10 and maximum score of 50. Scores were further categorized as follows: Likely to be well (10-19), mild distress (20-24), moderate distress (25-29) and severe distress ( $\geq 30$ ). Data analysis was conducted using IBM SPSS version 27.

**Results:** Out of 100 study subjects, 22% reported experiencing distress at well, indicating relatively minimal psychological distress. Meanwhile, 27% indicated mild level of distress, suggesting the presence of some emotional strain. Additionally, 24% reported moderate level of distress, implying more discernible degree of psychological challenge. On the other hand, 27% of participants faced severe level of distress. The mean score of distress was  $25.75 \pm 7.55$ .

**Conclusion:** The study highlights the need for tailored interventions to support students during exam preparation. Future research could delve into nuanced factors influencing distress levels.

**Keywords:** Psychological distress, Medical entrance exams, Stress assessment.

### INTRODUCTION

The term psychological distress is described as the condition of the person who experiences emotional suffering, such as feelings of stress, anxiety, depressed mood and burnout.<sup>[1]</sup> In today's competitive and demanding times, there is a growing demand for admission to medical colleges. The admission process for medical colleges in India hinges on twelfth-grade scores and entrance exam rankings, marking a significant journey from school to college. This transition constitutes a considerable "project," burdened with financial and emotional challenges for both students and their families during exam preparation.<sup>[2]</sup>

NEET, a competitive exam by NTA for medical college admissions in India, faces issues due to limited seats versus exam takers, adding stress. With up to 56% of students experiencing

significant stress, NEET highlights the psychological burden on aspirants striving to meet admission criteria for medical education.<sup>3</sup> While mild stress can enhance academic performance, persistent high stress can lead to headaches, forgetfulness, poor concentration, substance abuse, anxiety and psychological distress among medical students.<sup>4</sup> Symptoms of stress vary from minor fatigue to severe crises like heart attacks. Early recognition and management are vital for health and well-being. Coping strategies like relaxation techniques, communication, meditation and yoga aid in managing stress and promoting resilience in challenging situations.<sup>5</sup>

## MATERIALS AND METHODS

A cross-sectional study was conducted to assess psychological distress among students preparing for medical entrance exams. The study was carried out at selected coaching centres in Jalandhar, Punjab. A total of 100 students were included using the convenience sampling technique. Data were collected through interviews, which included socio-demographic profiles and Five-point Likert scale, specifically Kessler's Psychological Distress Scale. This scale consisted of 10 questions with responses ranging from "All of the time" (5) to "None of the time" (1), resulting in minimum score of 10 and maximum score of 50. Scores were further categorized as follows: Likely to be well (10-19), Mild distress (20-24), Moderate distress (25-29) and Severe distress ( $\geq 30$ ). Permission was obtained from the higher authorities of the coaching centres. The purpose of the study was explained to the students and written consent was obtained from each participant. Data analysis was conducted using IBM SPSS version 27.

## RESULTS

Out of the 100 participants, the majority are aged between 17 to 20 years (57%), with a balanced gender distribution (40% male, 60% female). Most students are in the 12th grade (55%) and overwhelmingly reside in urban areas (89%). Fathers tend to have higher educational qualifications, with 72% holding graduate degrees or above, while mothers also exhibit higher educational attainment (75% with graduate degrees or above). Few parents are engaged in medical professions, with only 12% of fathers and 3% of mothers employed in this field. Income levels vary, with 37% of families earning over six lakhs INR annually, while 34% of students report having at least one family member in the medical profession, potentially influencing their career aspirations. [Table 1].

**Table 1: Socio-demographic Profile of the students preparing for medical entrance exams.**

Variables	f & %
<b>Age (years)</b>	
<17	43
17-20	57
<b>Sex</b>	
Male	40
Female	60
<b>Class</b>	
11th	36
12th	55
Dropout	9
<b>Habitat</b>	
Rural	11
Urban	89

<b>Educational qualification of father</b>	
Primary	6
Secondary	3
Senior secondary	19
Graduate or above	72
<b>Educational qualification of mother</b>	
Informal	5
Primary	3
Secondary	6
Senior secondary	11
Graduate or above	75
<b>Father's occupation r/t medical profession</b>	
Yes	12
No	88
<b>Mother's occupation r/t medical profession</b>	
Yes	3
No	97
<b>Parent's Income</b>	
<1 lac per annum	7
1-3 lac per annum	20
4-6 lac per annum	36
>6 lac per annum	37
<b>Any family member in medical profession</b>	
Yes	34
No	66

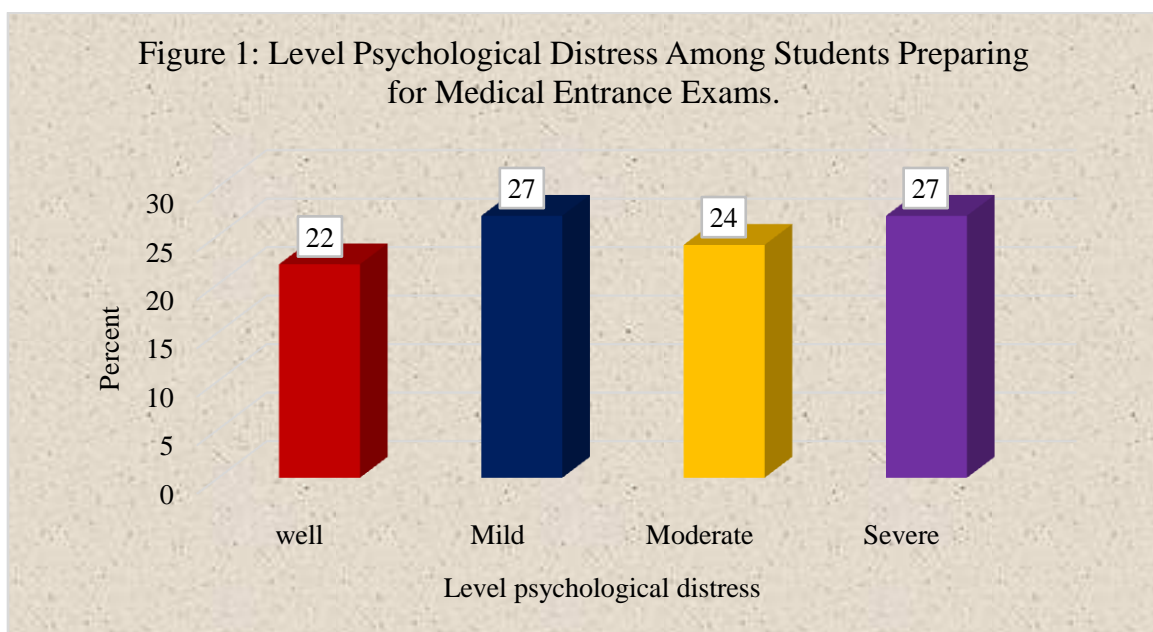


Figure 1 depicts that 22% reported experiencing distress at well, indicating relatively minimal psychological distress. Meanwhile, 27% indicated mild level of distress, suggesting the presence of some emotional strain. Additionally, 24% reported moderate level of distress, implying more discernible degree of psychological challenge. On the other hand, 27% of participants faced severe level of distress and considerable and noteworthy emotional load.

**Table 2: Descriptive Statistic of Psychological Distress Among Students Preparing for Medical Entrance Exams. N=100**

Mean	SD	Md	IQR	Min.	Max.	Range
25.75	7.55	25	10	13	47	34

The mean distress score is  $25.75 \pm 7.55$  and median score is 25(10). The minimum distress score recorded is 13, while the maximum is 47, resulting in range of 34. These statistics provide insights into the distribution and variability of psychological distress levels among the surveyed students, aiding in understanding the extent of distress in this population preparing for medical entrance exams [Table 2].

**Table 3: Association Between Level Psychological Distress with Their Demographic Variables. N=100**

Variables	Level Psychological Distress				$\chi^2$ value	df	P value
	well	Mild	Moderate	Severe			
<b>Age (in years)</b>							
<17	12	8	9	14	4.325	3	.228 <sup>NS†</sup>
17-20	10	19	15	13			
<b>Sex</b>							
Male	10	15	7	8	5.378	3	.146 <sup>NS†</sup>
Female	12	12	17	19			
<b>Class</b>							
11th	9	6	5	16	15.982	6	.008 <sup>St††</sup>
12th	12	18	18	7			
Dropout	1	3	1	4			
<b>Habitat</b>							
Rural	2	1	4	4	2.739	3	.409 <sup>NS††</sup>
Urban	20	26	20	23			
<b>Educational qualification of father</b>							
Primary	2	0	3	1	11.892	9	.208 <sup>NS††</sup>
Secondary	0	2	0	1			
Senior secondary	3	4	8	4			
Graduate or above	17	21	13	21			
<b>Educational qualification of mother</b>							
Informal	1	2	1	1	10.709	12	.570 <sup>NS††</sup>
Primary	1	1	0	1			
Secondary	0	3	1	2			
Senior secondary	2	2	6	1			
Graduate or above	18	19	16	22			
<b>Father's occupation r/t medical profession</b>							
Yes	2	4	4	2	1.413	3	.735 <sup>NS††</sup>
No	20	23	20	25			
<b>Mother's occupation r/t medical profession</b>							
Yes	1	2	0	0	3.560	3	.395 <sup>NS††</sup>
No	21	25	24	27			

Parent's Income							
<1 lac per annum	2	2	1	2	11.679	9	.205 <sup>NS††</sup>
1-3 lac per annum	1	7	7	5			
4-6 lac per annum	5	10	10	11			
>6 lac per annum	14	8	6	9			
Any family member in medical profession							
Yes	5	9	11	9	2.754	3	.43 <sup>NS††</sup>
No	17	18	13	18			
<b>NB:</b> <i>df</i> = degree of freedom, <i>S</i> = Significant ( $p < 0.01$ ), <i>NS</i> = non-significant, $\dagger\dagger$ = Fisher exact <i>p</i> value, $\dagger$ = Chi-square <i>p</i> value							

The results reveal that the class ( $\chi^2=15.982$ ,  $p=.008$ ) found significant at 0.01 level. Conversely, other demographic variables such as age, sex, habitat, educational qualification of the father, educational qualification of the mother, father's occupation in relation to the medical profession, mother's occupation in relation to the medical profession, parental income and the presence of any family member in the medical profession found non-significant at 0.05 level [Table 3].

## DISCUSSION

This study reveals that 22% reported experiencing distress at well, indicating relatively minimal psychological distress, 27% mild distress, 24% moderate distress and 27% severe distress, among students. Supported by Mishra *et al.*<sup>[6]</sup> who presented a staggering statistic, with over half of their participants reporting stress and a small but significant minority encountering extreme stress. Similarly, Irfan *et al.*<sup>[7]</sup> echoed this sentiment with a distress prevalence of 22.7%, demonstrating the consistent thread of psychological challenges across different studies. Moreover, Mehta *et al.*<sup>[4]</sup> exploration of gender and academic year differences in stress experiences further accentuates the complex interplay of individual attributes and external factors in shaping psychological well-being. Additionally, Giannopoulou *et al.*<sup>[8]</sup> found higher levels of experienced distress regarding academic examination.

The present study demonstrated a statistically significant association between academic class and the level of distress ( $\chi^2=15.982$ ,  $p=0.008$ ) at the 0.01 significance level. Interestingly, the remaining socio-demographic variables including age, gender, habitat, educational attainment of both parents, parental occupation in the medical field, parental income and any family member's affiliation with the medical profession, did not show significant associations at the 0.05 significance level. Notably, in contrast to the current findings, Irfan *et al.*<sup>[7]</sup> previously reported that gender-based correlations lacked significance ( $p > 0.05$ ).

## CONCLUSION

The study illuminates the imperative for tailored interventions to bolster students amid the rigors of exam preparation. Although no significant associations were found among other socio-demographic variables, future investigations could probe deeper into nuanced factors shaping distress levels in this cohort. Undoubtedly, the study underscores the paramount significance of nurturing psychological well-being among budding medical student, underscoring the profound influence of academic milieu on mental health. Research can explore stress mitigation strategies in coaching centers to promote student resilience and well-being during exam preparation.

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**Conflict of Interest:** The authors declare no conflict of interest.

## REFERENCES

1. Pal T, Singh S. Impact of clinical posting in psychiatry on the attitude towards mental illness in undergraduate final year medical students. *Asian Journal of Psychiatry*. 2022 Mar 1;69:103001.
2. Baru RV. Social determinants of wellness among medical students. *Indian Journal of Social Psychiatry*. 2021 Apr 1;37(2):148-51.
3. Premkumar, K., Sarojini, S., Vikram, A., Sivagurunathan, C., Ezhilvanan, M., Rakshanaa, R. et al. Prevalence of Depression and Anxiety among Students Preparing for National Eligibility Cum Entrance Test-Undergraduate Exam in Chennai, Tamil Nadu, India. *Journal of Clinical & Diagnostic Research*.2022;16(12):8-11.
4. Mehta, K., Kaur, S., Girgla, K. K., Kaur, P., & Kaur, H. A study of mental distress in medical students. *National Journal of Physiology, Pharmacy and Pharmacology*. 2015;1;5(3):190-194.
5. Townsend MC, Morgan KI. *Psychiatric mental health nursing: Concepts of care in evidence-based practice*. FA Davis; 2017 Oct 19.
6. Mishra SK, Yadav AK, Khadka P, KC P. Stress and Coping Among Students Preparing For Medical Entrance Examinations. *Journal of Psychiatrists' Association of Nepal*. 2020 Dec 31;9(2):42-7.
7. Irfan M, Sethi MR, Abdullah AS, Saleem U, Khan D. Psychological distress in students appearing for the medical school entrance examination in Peshawar. *JPMA. The Journal of the Pakistan Medical Association*. 2018 Nov 1;68(11):1603-7.
8. Giannopoulou I, Efstathiou V, Korkoliakou P, Triantafyllou G, Smyrnis N, Douzenis A. Mental health of adolescents amidst preparation for university entrance exams during the second pandemic-related lockdown in Greece. *Journal of Affective Disorders Reports*. 2022 Apr 1;8:100339.