



## PREVALENCE OF PSYCHOLOGICAL STRESS AND ANXIETY AMONG MEDICAL STUDENTS, KANPUR, UTTAR PRADESH

Dr. Lakshmi Singh<sup>1\*</sup>, Dr. (Prof) Anju Gahlot<sup>2</sup>, Dr (Prof) Atul Kumar Singh<sup>3</sup>,  
Dr. Saket Shekhar<sup>4</sup>

<sup>1\*</sup> Assistant Professor, Department of Community Medicine, Rama Medical College Hospital and Research Centre, Kanpur, Uttar Pradesh, India.

<sup>2</sup> Professor, Department of Community Medicine, Rama Medical College Hospital and Research Centre, Kanpur, Uttar Pradesh, India.

<sup>3</sup> Professor, Department of Community Medicine, Rama Medical College Hospital and Research Centre, Kanpur, Uttar Pradesh, India.

<sup>4</sup> Assistant professor, Department of Community Medicine, Rama Medical College Hospital and Research Centre, Kanpur, Uttar Pradesh, India

**\*Corresponding Author:** Dr. Lakshmi Singh  
\*Email: lakshmi.singh6481@gmail.com

### ABSTRACT:

**Introduction:** Stress and anxiety among medical students have become increasingly recognized as significant issues within the healthcare education system. The demanding nature of medical education, characterized by rigorous coursework, intense clinical rotations, and high-stakes examinations, places immense pressure on students. This pressure can lead to chronic stress and anxiety, which not only affect their mental health but also their academic performance and overall wellbeing.

**Aim and Objectives:** To find the prevalence of common psychological conditions in medical students of Rama Medical College Hospital and Research Centre, Kanpur.

**Material and Methods:** This is a cross-sectional analytical study carried out in the Department of Community Medicine involving 164 medical students of Rama Medical College, Kanpur using convenient sampling. The study used a semi-structured online questionnaire, pretested for clarity and relevance, to collect data regarding psychological stress and anxiety among the participants.

**Results:** In the present study, it was observed that there were 60.2% females and 45.1% of males suffered from stress while 52.7% of females and 38% of males suffered from anxiety respectively. There is a significant association of stress with alcohol consumption, smoking, insomnia, and physical exercise.

**Conclusion:** Anxiety and stress are highly prevalent among medical students, and targeted interventions are necessary to overcome them. Lifestyle management can help reduce the prevalence.

**Keywords:** psychological stress, anxiety, mental health, prevalence, medical students

### INTRODUCTION

The prevalence of psychological stress and anxiety among medical students has become a growing concern worldwide. In the demanding and rigorous academic environment of medical education, students often face significant stressors that can adversely impact their mental health. Kanpur, situated in Uttar Pradesh, India, houses several medical institutions where students undergo intensive training

and education. Medical students are more likely to experience a broad range of mental health problems, including depression, anxiety, burnout, and anorexic tendencies, than those studying other subjects, say researchers who also found that stigma was a major factor preventing students seeking help (1).

This study aims to explore the prevalence of psychological stress and anxiety among medical students in Rama Medical College, Kanpur, Uttar Pradesh. Understanding the prevalence rates and associated factors is crucial for developing effective interventions and support systems to address the mental health challenges faced by these students. Numerous studies globally have highlighted the elevated levels of stress and anxiety among medical students. The nature of the curriculum, workload, clinical responsibilities, and high expectations contribute to heightened stress levels. Additionally, factors such as fear of failure, competition, sleep deprivation, and the emotional toll of dealing with human suffering during clinical rotations can exacerbate psychological distress. Academic stress has been identified as an important predictor of poor mental health. Also, stress is an important cause of declining empathy among medical students (2). Some degree of stress facilitates learning and performance, but intense pressure and huge demands of the medical curriculum may have undesirable effects on vulnerable students' behavior which reduces their learning abilities (3) one study by Hajar Essangri indicates that medical students present a high prevalence of mental health disorders, with 62.3%, 74.6%, 62.6%, and 69% having symptoms of anxiety, depression, insomnia, and psychological distress, respectively (4).

Identifying the prevalence rates specific to Kanpur's medical student population will provide insights into the local context, potentially unveiling region-specific stressors or cultural influences contributing to stress and anxiety. Moreover, it will aid in tailoring targeted interventions and support mechanisms to alleviate the burden of mental health issues among these students.

## Material and Methods

**Study Design:** This study employed a cross-sectional design to assess the prevalence of psychological stress and anxiety among medical students at Rama Medical College, Kanpur, Uttar Pradesh, India.

**Study Participants:** The study included medical students from the first year to the final year who voluntarily agreed to participate. A convenient sampling method was utilized, and a total sample size of 164 medical students was obtained.

### Aim and Objectives:

- To find the prevalence of common psychological conditions in medical students of Rama Medical College Hospital and Research Centre, Kanpur.
- To find the association between sociodemographic factors and degree of stress and anxiety among study participants.

**Study Area:** Rama Medical College Hospital and Research Centre, Kanpur (RMCH&RC)

**Study Period:** The study was conducted between September 2023 and October 2023 at Rama Medical College, Kanpur, Uttar Pradesh, India.

**Sample size:** According to a previous study done by Gidey Rtbey et al (5), conducted in the year 2022 the prevalence of mental stress in medical students was found to be 45.95%, and applying the formula  $N = \frac{4PQ}{D^2}$

$D = 4.5\%$  absolute precision and 95% confidence interval

$N = 122.6$  adding 10% non response, it came out to be 135 but we took 164 students by convenient sampling.

**Inclusion criteria:** Medical Students from 1<sup>st</sup> to final year MBBS were included in this study.

**Exclusion criteria:** Non cooperative and unwilling students and who did not respond to Google Form.

**Sampling:** The sampling method used in this study was convenient sampling.

**Data Collection:** A semi-structured online questionnaire, pretested for clarity and relevance, was developed to collect data regarding psychological stress and anxiety among the participants. The Scales used in the study were the GAD (Generalized Anxiety Disorder) Scale, Kessler's Psychological

Distress Scale, and Insomnia Severity Index Scale, a questionnaire was administered using Google Forms, providing an accessible and convenient platform for data collection.

**Ethical Considerations:** Ethical approval was obtained from the ethics committee of Rama Medical College before commencing the study. Informed consent was obtained from all participants before their inclusion in the study, ensuring their voluntary participation and confidentiality of responses. (RMCHRC/Ethics/2023/3156)

**Data Collection Process:**

1. An invitation containing the purpose and details of the study, along with the link to the Google Form questionnaire, was sent to all eligible medical students.
2. Participants who voluntarily agreed to participate completed the online questionnaire anonymously through the Google Forms platform.
3. Data collected included demographic information, academic year, and responses related to stress and anxiety indicators.

**Data Analysis:** The collected data was analyzed using appropriate statistical methods. Descriptive statistics, such as frequencies, percentages, and mean scores, were computed to summarize the prevalence of stress and anxiety among medical students, statistical significance was tested using Chi-square test and P value using Jamovi software (2.4.8).

**RESULTS**

In the present study a total of 164 students participated in the study, the majority of the individuals (68.9%) fall within the 21-24 years age range, which suggests that the population is primarily in the early twenties. There are more females (56.7%) than males in this group. Nearly all individuals are unmarried, indicating a predominantly single population. The distribution of year is relatively balanced with the highest concentration in the 1st and 3rd years of MBBS. A significant majority of the population does not engage in alcohol abuse. The vast majority of individuals do not smoke either. (table 1) There is no significant association between age group and stress levels (P-value = 0.497). There is no significant association between gender and stress levels, but it is close to the significance threshold (P-value = 0.061). There is no significant association between marital status and stress levels (P-value = 0.316). There is no significant association between the year of MBBS and stress levels (P-value = 0.675). There is a significant association between alcohol abuse and stress levels, with alcohol abusers showing higher stress levels (P-value < 0.001) There is a significant association between smoking and stress levels, with smokers showing higher stress levels (P-value < 0.001) There is a significant association between insomnia and stress levels, with subthreshold insomnia associated with higher stress levels (P-value < 0.001) There is a significant association between physical exercise and stress levels, with those who do no exercise showing higher stress levels (P-value = 0.009). (Table 2). There is no significant association between age and anxiety levels (P-value = 0.810) There is no significant association between gender and anxiety levels (P-value = 0.187). There is no significant association between marital status and anxiety levels (P-value = 0.917) There is a significant association between the year of MBBS and anxiety levels (P-value = 0.044). First-year students tend to have higher levels of mild and severe anxiety compared to students in other years. There is no significant association between smoking and anxiety levels (P-value = 0.672).

There is a significant association between alcohol abuse and anxiety levels (P-value = 0.012). Individuals who abuse alcohol tend to have higher levels of moderate and severe anxiety. There is no significant association between insomnia and anxiety levels (P-value = 0.325). There is no significant association between physical exercise and anxiety levels (P-value = 0.216) (Table 3).

**Table: 1. Demographic Characteristics among study participants (n=164)**

VARIABLE	CATEGORY	NUMBER	PERCENTAGE
AGE GROUP	18-20 YEARS	43	26.2
	21-24 YEARS	113	68.9
	≥25 YEARS	8	4.9
GENDER	MALE	71	43.3
	FEMALE	93	56.7
MARITAL STATUS	MARRIED	3	1.8
	UNMARRIED	161	98.2
YEAR OF MBBS	1 <sup>ST</sup> YEAR	59	36.0
	2 <sup>ND</sup> YEAR	23	14.0
	3 <sup>RD</sup> YEAR	57	34.8
	4 <sup>TH</sup> YEAR	25	15.2
ALCOHOL ABUSE	YES	29	17.7
	NO	135	82.3
SMOKING	YES	11	6.7
	NO	153	93.3
PHYSICAL EXERCISE	<150 MINS/WEEK	74	45.4
	>150MINS/WEEK	34	20.9
	NO	55	33.7

The table 1 outlines demographic characteristics within a study population of 164 individuals. The study population consists mainly of unmarried medical students between the ages of 21-24 years, with a slight majority being female. Most of the students are in either their 1st or 3rd year of MBBS. A significant majority do not abuse alcohol or smoke, though there are notable minorities for both behaviours. Around 45.4% engage in physical exercise for 150 minutes or less per week, approximately 20.9% exercise over 150 minutes per week, and about 33.7% do not engage in any physical exercise This demographic data provides a useful context for understanding the subsequent analysis of stress and anxiety levels among these students, especially in relation to their lifestyle choices and year of study.

**Table:2. Sociodemographic factors associated with degree of stress among participants (n=164)**

STRESS	WELL	MILD	MODERATE	SEVERE	CHI SQUARE	P VALUE
Age Group						
Less than 20 years	10(62.5%)	4(25.0%)	1(6.3%)	1(6.3%)	2.38	0.497
More than equal to 20 years	66(44.6%)	41(27.7%)	26(17.6%)	15(10.1%)		
Gender						
Male	39(54.9%)	18(25.4%)	6(8.5%)	8(11.3%)	7.37	0.061
Female	37(39.8%)	27(29.0%)	21(22.6%)	8(8.6%)		
Marital Status						
Married	3(100%)	0(0.0%)	0(0.0%)	0(0.0%)	3.54	0.316

unmarried	73(45.3%)	45(28.0%)	27(16.8%)	16(9.9%)		
Year of MBBS						
1 <sup>st</sup> year	21(35.6%)	19(32.2%)	12(20.3%)	7(11.9%)	6.64	0.675
2 <sup>nd</sup> year	12(52.2%)	6(26.1%)	2(8.7%)	3(13.0%)		
3 <sup>rd</sup> year	30(52.6%)	14(24.6%)	10(17.5%)	3(5.3%)		
4 <sup>th</sup> year	13(52.0%)	6(24.0%)	3(12.0%)	3(12.0%)		
Alcohol						
Yes	6(20.7%)	6(20.7%)	3(10.3%)	14(48.3%)	60.0	*<0.001
No	70(51.9%)	39(28.9%)	24(17.8%)	2(1.5%)		
Smoking						
yes	3(27.3%)	1(9.1%)	1(9.1%)	6(54.5%)	27.0	*<0.001
no	73(47.7%)	44(28.8%)	26(17.0%)	10(6.5%)		
Insomnia						
No insomnia	76(50.3%)	42(27.8%)	20(13.2%)	13(8.6%)	21.2	*<0.001
Subthreshold insomnia	0(0.0%)	3(23.1%)	7(53.8%)	3(23.1%)		
Physical exercise/week						
<150mins/week	40(58.0%)	19(27.5%)	7(10.1%)	3(4.3%)	17.1	*0.009
>150 mins /week	16(50.0%)	9(28.1%)	6(18.8%)	1(3.1%)		
no	20 (31.7%)	17(27.0%)	14(22.2%)	12(19.0%)		

\*P value <0.05 is statistically significant

Table 2 depicts sociodemographic factors associated with the degree of stress among 164 students. Alcohol use, smoking, insomnia, and physical exercise per week are significantly associated with stress levels with p value <0.05 Age group, gender, marital status, and year of MBBS do not show significant associations with stress levels, though gender is close to being significant.

**Table:3. Sociodemographic factors associated with degree of anxiety among participants (n=164)**

Characteristics	Anxiety						total	Chi square	P value
	minimal	mild	moderate	severe					
Age	Less than 20 years	9(56.3%)	6(37.5%)	1(6.3%)	0(0.0%)	16	3	0.810	
	More than equal to 20 years	79(53.4%)	48(32.4%)	16(10.8%)	5(3.4%)	148			
Gender	Male	44(62.0%)	18(25.4%)	6(8.5%)	3(4.2%)	71	3	0.187	
	Female	44(47.3%)	36(38.7%)	11(11.8%)	2(2.2%)	93			
Marital status	married	2(66.7%)	1(33.3%)	0(0.0%)	0(0.0%)	3	0.506	0.917	
	unmarried	86(53.4%)	53(32.9%)	17(10.6%)	05(3.1%)	161			
Year of MBBS	1 <sup>st</sup> year	25(42.4%)	28(47.5%)	3(5.1%)	3(5.1%)	59	9	*0.044	

	2 <sup>nd</sup> year	12(52.2%) )	6(26.1%) )	4(17.4%) )	1(4.3%) )	23		
	3 <sup>rd</sup> year	33(57.9%) )	15(26.3%) )	9(15.8%) )	0(0.0%) )	57		
	4 <sup>th</sup> year	18(53.7%) )	5(20.0%) )	1(4.0%) )	1(4.0%) )	25		
Smoking	Yes	6(54.5%) )	3(27.3%) )	1(9.1%) )	1(9.1%) )	11	1.55	0.672
	No	82(53.6%) )	51(33.3%) )	16(10.5%) )	4(2.6%) )	153		
Alcohol abuse	Yes	18(62.1%) )	4(13.8%) )	4(13.8%) )	3(10.3%) )	29	10.9	*0.012
	No	70(51.9%) )	50(37.0%) )	13(9.6%) )	2(1.5%) )	135		
Insomnia	No insomnia	84(55.6%) )	48(31.8%) )	15(9.9%) )	4(2.6%) )	151	3.47	0.325
	Subthreshold insomnia	4(30.8%) )	6(46.2%) )	2(15.4%) )	1(7.7%) )	13		
Physical exercise/week	<150mins/week	39(56.5%) )	20(29.0%) )	9(13.0%) )	1(1.4%) )	69	4	0.216
	>150mins/week	20(62.5%) )	9(28.1%) )	2(6.3%) )	1(3.1%) )	32		
	No	29(46.0%) )	25(39.7%) )	6(9.5%) )	3(4.8%) )	63		

\*p value <0.05 is statistically significant

Table 3 presents sociodemographic factors associated with the degree of anxiety among 164 students. There was a statistically significant association, between alcohol abuse with a p-value equal to 0.012, and Year of MBBS with a p-value equal to 0.044. Age, gender, marital status, smoking, insomnia, and physical exercise per week do not show significant associations with anxiety levels.

## DISCUSSION

Psychological mood disorders are prevalent global illnesses that have a substantial impact on both physical and social well-being. Medical students exhibit a higher susceptibility to psychological mood disorders compared to the general population, primarily due to variations in their study methods, personal lives, and social variables, in addition to the usual stressors they encounter. The present study aimed to assess the prevalence of anxiety and stress, among medical students at RMCH, RC, Kanpur, Uttar Pradesh. Additionally, it sought to determine the many risk variables related with psychological disorders among the participants of the study.

In the present study, 60.2% females and 45.1% males suffered from stress while 52.7% females and 38% males suffered from anxiety respectively. There was another study performed by Islam et al. (6) in 2020, surveyed 400 undergraduate students in Bangladesh using the GAD-7 scale. and PHQ-9 to assess the prevalence of Stress and anxiety and their potential associated factors, and they found that the prevalence rates of stress and anxiety were 69.5% and 61% respectively(6).

In the present study, the age groups, less than 20 years observed 9 students were in minimal, 6 in mild, 1 in moderate and no one in severe category. In the age group more than equal to 20 years 79 students were in minimal category, while 48 in mild, 16 in moderate, and 5 in severe category. This Shows that severity of anxiety increases with age. Also severity of anxiety was more in 1<sup>st</sup> year MBBS students.

Regarding Stress males and females are almost equally suffering from stress. Gender disparities can be ascribed to biological, social, or varying mixtures of risk factors. (7).

In a study conducted by Fawzy and Hamed in 2017((8)), they performed both univariate and multivariate statistical analysis. Their findings revealed that females had significantly higher scores

on the Depression, Anxiety, and Stress Scale (DASS) compared to males. Mental health issues affect a significant proportion of medical students in Asia. While the prevalence of depression and anxiety are lower than global values,(9) Conversely, a study conducted by Abdallah and Gabr in 2014 in Egypt found that male university students had a higher susceptibility to depression than their female counterparts. However, girls experienced a greater prevalence of anxiety in comparison to males (10). Islam et al., 2020,(6) found no substantial gender disparities in depression and anxiety among the students examined. Furthermore, research carried out by Kulsoom and Afsar (2015) in Saudi Arabia and Alim et al. (2017)(10)in Bangladesh respectively reached the conclusion that there were no statistically significant disparities between genders in terms of depression or anxiety. In addition, a study conducted by Quek et al. (2019) performed subgroup analyses based on gender and showed no statistically significant disparities in the prevalence of anxiety between males and females (11).In our study there was a significant association of alcohol abuse and stress p-value (<0.001)Alcohol use, and smoking, with p-value<0.05 signifies that students who were smoking andwho were alcohol abusers were in more stress as compared to non-users.Generally, a high prevalence of psychoactive substance use among medical students, including alcohol, has already been reported. It can be also associated with burnout syndrome, depressive disorders, and other psychiatric comorbidities (12). Students doing physical exercise were also in mild to moderate stress and sleep quality was more improved in those having no stress. Aktekin et al. reported that the prevalence of psychological distress was 48% in second year Turkish medical students,(13) while in our study there is no significant association between the year of MBBS and stress levels (P-value = 0.675) but First-year students tend to have higher levels of mild and severe anxiety compared to students in other years.Studies from Pakistan and Thailand reported a higher level of stress among third and fourth-year students (13). In a study by Yesim Senoletal the anxiety score was significantly higher in smoker students ( $45.6 \pm 6.0$  points) than in those who did not start smoking ( $42.2 \pm 7.3$  points) ( $p < 0.05$ ) (14).

Medical education involves fulltime commitment and responsibility of undergraduates to achieve learning outcomes necessary to become a competent health professional (15) Students face tremendous pressure because of enormous workload and academic demands that require during their long course of studying (16). Psychological distresses among medical students have a negative impact on students' academic and personal lives, such as increased drop-out rates from medical school, poor academic performance, broken relationships, loneliness, poor sleep, substance abuse, and suicide. There has been concern about the mental health issues of the students as raised by a number of students at the School. The heavy workload, curriculum burden, and ancillary courses are being considered as the potential reasons for these perceived psychological problems (17,18). Intervention programs to address the mental health problems of such students should be initiated.

## CONCLUSION

The findings of the present study indicate that alcohol use and smoking are significantly associated with both higher stress and higher anxiety levels, indicating that these lifestyle factors may contribute to psychological distress. Insomnia is significantly associated with higher stress levels but not with anxiety levels, suggesting that stressaffects sleep quality more directly physical exercise is significantly associated with stress levels but not anxiety levels, highlighting the role of physical activity in managing stress.

Year of MBBS shows a significant association with anxiety levels, indicating that the year of study may influence anxiety, possibly due to varying academic pressures. Factors such as age, gender and marital status do not show significant associations with either stress or anxiety levels, suggesting these demographic factors might not play a crucial role in these specific psychological outcomes. These findings highlight the importance of addressing lifestyle factors, such as alcohol consumption, smoking, and physical activity, in managing stress and anxiety among individuals, particularly among medical students. Additionally, targeted interventions could be designed to support students in different years of their medical education to reduce anxiety. To address these challenges, medical colleges should implement comprehensive wellness programmes that include mental health support

services, stress management, workshops, and initiatives to promote a healthy work life balance. By prioritizing mental health within medical education, we can cultivate a generation of resilient, empathetic, and effective healthcare providers.

**Limitations:**

- The study's cross-sectional nature limited the ability to establish causality.
- Convenience sampling might introduce selection bias, affecting the generalizability of findings. Self-reported data might be subjected to recall or social desirability bias.

**Acknowledgement:** We would like to thank all the students for their willingness to participate in the study without which the study would not be possible.

**Conflict of interest:** There is no conflict of interest.

**Authors contribution:** All the authors had made substantial contribution to conception, design, data collection, analysis and interpretation of data.

**Funding:** No funding from the institute.

**References:**

1. Wilkinson E. Medical students face high levels of mental health problems but stigma stops them getting help. *BMJ*. 2023 Apr 25;381:p933.
2. Bergmann C, Muth T, Loerbroks A. Medical students' perceptions of stress due to academic studies and its interrelationships with other domains of life: a qualitative study. *Med Educ Online*. 2019 Apr 22;24(1):1603526.
3. Azim SR. Mental Distress among Medical Students. In: *Anxiety Disorders - The New Achievements* [Internet]. IntechOpen; 2020 [cited 2023 Sep 23].
4. Essangri H, Sabir M, Benkabbou A, Majbar MA, Amrani L, Ghannam A, et al. Predictive Factors for Impaired Mental Health among Medical Students during the Early Stage of the COVID-19 Pandemic in Morocco. *Am J Trop Med Hyg*. 2021 Jan 6;104(1):95–102.
5. Rtbey G, Shumet S, Birhan B, Salelew E. Prevalence of mental distress and associated factors among medical students of University of Gondar, Northwest Ethiopia: a cross-sectional study. *BMC Psychiatry*. 2022 Aug 2;22(1):523.
6. Islam S, Akter R, Sikder T, Griffiths MD. Prevalence and Factors Associated with Depression and Anxiety Among First-Year University Students in Bangladesh: A Cross-Sectional Study. *Int J Ment Health Addict*. 2022 Jun;20(3):1289–302.
7. Amr M, Hady El Gilany A, El-Hawary A. Does Gender Predict Medical Students' Stress in Mansoura, Egypt? *Med Educ Online*. 2008 Aug 14;13:12.
8. Fawzy M, Hamed SA. Prevalence of psychological stress, depression and anxiety among medical students in Egypt. *Psychiatry Res*. 2017 Sep;255:186–94.
9. Cutilan AN, Sayampanathan AA, Ho RCM. Mental health issues amongst medical students in Asia: a systematic review [2000–2015]. *Ann Transl Med*. 2016 Feb;4(4):72–72.
10. Abdallah AR, Gabr HM. Depression, anxiety and stress among first year medical students in an Egyptian public university.
11. Quek TTC, Tam WWS, Tran BX, Zhang M, Zhang Z, Ho CSH, et al. The Global Prevalence of Anxiety Among Medical Students: A Meta-Analysis. *Int J Environ Res Public Health*. 2019 Jul 31;16(15):2735.
12. Gajda M, Sedlaczek K, Szemik S, Kowalska M. Determinants of Alcohol Consumption among Medical Students: Results from POLLEK Cohort Study. *Int J Environ Res Public Health*. 2021 May 30;18(11):5872.
13. Jafari N, Loghmani A, Montazeri A. Mental health of Medical Students in Different Levels of Training. *Int J Prev Med*. 2012 Mar;3(Suppl1):S107–12.



14. Senol Y, Donmez L, Turkay M, Aktekin M. The incidence of smoking and risk factors for smoking initiation in medical faculty students: cohort study. *BMC Public Health*. 2006 May 10;6(1):128.
15. Sahu, Pradeep Kumar et al. Prevalence of Psychological Distress among Undergraduate Medical Students. *International Journal of Applied and Basic Medical Research*. 2020; 10(4):p 270-275.
16. Saumik Chakraborty et al. 'Depression, Anxiety and Stress Among Medical Students And Junior Doctors - A Cross Sectional Study In A Medical College of India. *International Journal of Current Advanced Research*.2021; 10(7):24691- 24696.
17. Sindhu Mandyam et al. A Study on Depression, Anxiety and Stress Among Medical Undergraduate Students of a Women's Medical College, South India. *National Journal of Community Medicine*. 2023; 14 (2).
18. Atheer G. Almutairi et al. Prevalence and factors causing test anxiety among medical students. *Middle East Current Psychiatry*. 2024; 31.