

# Prevalence of Anxiety and Depression among Undergraduate Medical Students in Selective Medical Colleges of Bangladesh

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## ABSTRACT

**Background:** Mental well being of medical students has been a growing concern for several years. In Bangladesh, mental health problems are still considered as stigma. The aim of this study was to find out prevalence of anxiety and depression among medical students of Bangladesh.

**Materials and methods:** This descriptive cross-sectional study was designed to find out the prevalence of anxiety and depression among undergraduate medical students (4<sup>th</sup> year) of 2 medical colleges (Brahmanbaria Medical College and Army Medical College Bogura) of Bangladesh during the month of March, 2020. Hospital Anxiety and Depression Scale (HADS) was used as data collection instrument. Total 85 students participated in the study.

**Results:** Among the participants, 53 (62.3%) were female and 32 (37.7%) were male. 20% students were suffering from borderline anxiety and 52.94% were suffering from abnormal level of anxiety. On the other hand, 28.24% were suffering from borderline depression and 30.59% were suffering from abnormal level of depression. Mean value of anxiety was  $9.84 \pm 3.8$  and  $11.55 \pm 4.34$  among male and female respectively and the difference was not significant. There were no significant difference among male and female students in anxiety and depression ( $9.84 \pm 3.8$  vs  $11.55 \pm 4.34$ ,  $p=0.07$  and  $8.31 \pm 3.96$  vs  $9.40 \pm 4.55$ ,  $p=0.25$ ).

**Conclusion:** Most of students of selected medical colleges of Bangladesh had been suffering from different level of anxiety and depression during the study period. There is a need to identify the contributory factors as well as undertaking of proper measures in reducing those factors which in long run will be helpful for improvement of academic performance and professionalism.

**Key words :** Anxiety; Bangladesh; Depression; Mental Health Problems (MHPs); Medical students.

## Introduction

There is growing concern regarding the increased prevalence and severity of Mental Health Problems (MHPs) among medical students which can significantly impair quality of life and empathy.<sup>1-4</sup> A higher mental well-being is positively associated with empathy and negatively associated with declined academic performances, suicidal ideation, unprofessional

behaviors and burnout. Thus MPHs could affect patient care, since empathy and professionalism might be impaired.<sup>5</sup>

Anxiety, a form of MPHs is experienced by every individual at some point or the other in his/ her life. It is a series of symptoms, which arise from faulty adaptation to the stresses and strains of life. Anxiety is one of the most common problems faced by medical students.<sup>6,7</sup> Depression, another form of MHPs is characterized by extreme dejection, gloomy ruminations, feelings of worthlessness, loss of hope and often of apprehension.<sup>6</sup> The World Health Organization has declared depression as a common mental disorder. Globally, more than 264 million people of all ages suffer from depression. It is a leading cause of disability worldwide because of its physical, psychological and social impacts and is a major contributor to the overall global burden of disease.<sup>8</sup> Many factors might increase students' susceptibility to anxiety and depressive disorder. These factors include female gender, changes in lifestyle, financial stressors, family relationship changes, socioeconomic status, exposure to an older, fragmented, and more theoretical curricular structure and academic worries with post-graduation.<sup>9,10</sup>

Medical students are being trained to meet the healthcare

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Date of Submission : 10th March 2022  
Date of Acceptance : 27th March 2022

needs of current and future national populations. This is usually achieved through an arduous training curriculum and long-term clinical practice, for which high levels of motivation, intelligence and stamina is expected. Generally, the total time required to acquire the necessary professional knowledge and skills is greater for medical students than those with other majors and the pace of receiving knowledge is faster than the student ever faced before.<sup>11,12</sup>

Under graduate course of Bangladesh has four phases and each phase ends with a university level summative test.<sup>13</sup> They get less opportunity to relax and face highly stressful environment, competitiveness, excessive workload, peer pressure and many other personal, curricular, institutional, and affective factors. All these factors contribute to sleep deprivation, impaired judgment, reduced concentration, loss of self-esteem, along with anxiety and depression which affects their learning ability and academic performance. But these reliable indicators of mental health problems like anxiety and depression are often under diagnosed and under treated.<sup>14</sup> There are few studies conducted in Bangladesh in this regard (Reference).<sup>15,16</sup> In this backdrop, current study was conducted to find out the prevalence of anxiety and depression among the undergraduate medical students of Bangladesh.

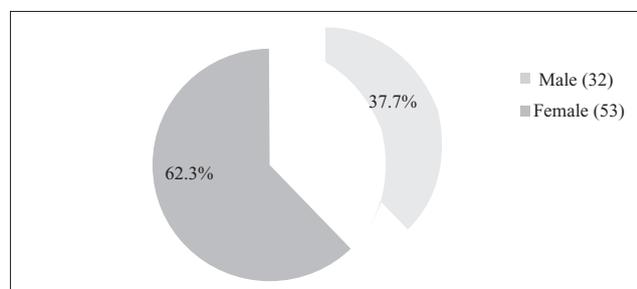
### Materials and methods

This cross-sectional study was conducted at Brahmanbaria Medical College and Army Medical College, Bogra in the month of March, 2020. The students of 4<sup>th</sup> (3<sup>rd</sup> Phase) year was the study population.

After taking proper approval from the concerned authority data were collected by using the Hospital Anxiety and Depression Scale (HADS).<sup>17</sup> Mean HADS score of men and women was analyzed and compared. Statistical analysis was done with Microsoft Office Excel 2007.

### Result

Figure 1 showing distribution of gender which include 53 female (62.3%) and 32 male (37.7%) participants.



**Figure 1** Gender distribution of the students

Table I showed that out of 85 participants, 23 (27.06%) were anxiety free, 17 (20.00%) suffered from borderline anxiety and 45 (52.94%) suffered from abnormal anxiety level.

**Table I** Severity of anxiety based on Hospital Anxiety and Depression Scale (HADS) (n=85)

Scoring	Male		Female		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
0-7 (Normal)	11	34.37	12	22.64	23	27.06
8-10 (Borderline abnormal)	5	15.63	12	22.64	17	20.00
11-21 (Abnormal)	16	50.00	29	54.72	45	52.94

Table II showed that out of 85 participants, 35 (41.18%) had no depression, 24 (28.24%) suffered from borderline depression and 26 (30.59%) were suffered from abnormal level of depression.

**Table II** Severity of depression based on Hospital Anxiety and Depression Scale (HADS) (n=85)

Scoring	Male		Female		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
0-7 (Normal)	16	50.00	19	35.85	35	41.18
8-10 (Borderline abnormal)	9	28.12	15	28.12	24	28.24
11-21 (Abnormal)	7	21.88	19	35.85	26	30.58

Table III showed that there was no significant gender difference in anxiety and depression level.

**Table III** Comparison of severity anxiety and depression based on Hospital Anxiety and Depression Scale (HADS) (n=85)

Mean Score	Male	Female	p value
Anxiety	9.84 ± 3.82	11.55 ± 4.34	0.062
Depression	8.31 ± 3.96	9.40 ± 4.55	0.249

Unaired t-test was done;  $p \leq 0.05 =$  Statistically significant

### Discussions

Anxiety and depression are global problems which reflect the mental health status of the population. Medical colleges possess an environments connected with stressors and factors like anxiety and depression that negatively impact academic performance as well as both physical and emotional health of students.<sup>18,19</sup> Current study found that majority of the students suffered from different levels of anxiety disorder. Similar high prevalence of anxiety and depression has been reported among other studies conducted in Asia.<sup>20,21</sup> This finding also corresponds with a study finding conducted in Bangladesh though different scale was used to evaluate anxiety level.<sup>15</sup>

Depression, another important and crucial form of MHP, also found in majority of participants of the present study that was similar with the previous studies.<sup>20,21</sup> Similar finding had been also documented in studies conducted in Bangladesh.<sup>15,16</sup>

In different studies an association of gender with both depression and stress were found.<sup>16,22</sup> Studies showed that women have a greater prevalence of depression and anxiety in the general population, although data for medical students are conflicting. Nevertheless, a systematic review revealed that half of the studies published involving medical students reported that anxiety and depression level is higher among the female students.<sup>22</sup> One study conducted in Bangladesh reported higher prevalence of depression among male students.<sup>16</sup> But current study did not found any significant difference among the female and male students which corresponds with the findings of similar studies conducted in some other countries.<sup>23, 24 ,25</sup>

#### Limitation

The study was conducted at two places with few respondents, so actual picture cannot be assessed.

#### Conclusion

The prevalence of anxiety and depression found higher, and almost equal among both gender of medical students of Bangladesh.

#### Recommendation

It's high time to take appropriate measures to reduce anxiety and depression level among the medical students.

#### Acknowledgements

The authors express their thanks to all respondents.

#### Disclosure

All the authors declared no competing interest.

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