

## Level of Anxiety among Medical Students: A Descriptive Cross-Sectional Study

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### ABSTRACT

**Introduction:** Anxiety is one of the common psychological disorders showing more prevalence among medical students. Symptoms seen in the anxiety are excessive fear- worry and negative thoughts. In India and Pakistan have reported prevalence of anxiety consist of 66.9% and 44.7% % among undergraduate medical students, respectively. This study aims to find out the prevalence of anxiety among medical students.

**Objective:** To assess the prevalence of anxiety among medical students of fourth year MBBS students of National Medical College and Teaching Hospital, Birgunj, Nepal

**Method:** A descriptive cross-sectional study was done to observe prevalence of anxiety in medical students of fourth year by using Hamilton Anxiety Rating Scale questionnaire. Data was entered and analyzed by the use of Statistical Package for Social Sciences version 20.0

**Result:** The prevalence of anxiety among the students was found to be 70.4%, where as 64.3% students had mild and moderate anxiety, 6.1% of them had severe anxiety. The prevalence of anxiety among male students was 53.6%.

**Conclusion:** Anxiety of prevalence was high among medical students. Rate of anxiety was more in male.

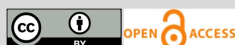
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### INTRODUCTION

World Health Organization (WHO) recognizes mental health disorder as one of

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the important causes of mortality and disability.<sup>1</sup> Anxiety is an emotion in which body shows unabated response towards excessive worry and pessimistic thoughts which is characterized by tensed feeling, phobias, uneasiness and over thinking.<sup>2,3,6</sup> Currently 4%

population on earth experience anxiety disorder as per WHO. It is estimated till 2019 about 301 million people have symptoms of anxiety disorder that includes 58 million children and adolescents. The global disability-adjusted life years was 7.07% due to anxiety disorders and mainly affected age group was between 5–39 years.<sup>4</sup>

Anxiety might be aggravated by causes like stress, work pressure, domestic violence, childhood trauma, health conditions, child abuse, family history, witness of dangerous accidents and unpleasant house/working environment. Some risk factors are personality traits like introvertedness, low self-esteem, nervousness, self-doubt, family history of similar mental illness, unrecovered chronic disease condition, past mental trauma history and substance abuse.<sup>5,6</sup>

Common symptoms seen in this disorder are heavy breathing, uneasiness, crying, palpitation, muscle ache mainly of lower limbs, tingling sensation of body, shaking legs and biting nails frequently, avoiding gathering, staying alone, disturbance in sleep pattern and decreased concentration. Symptoms might differ from person to person and it lasts for few minutes.<sup>3,5,6</sup>

Other studies have been conducted in various region of Nepal. This study intends to close the gap left by previous research revealing the prevalence of study related anxiety among medical students in Nepal, enabling prompt help

and intervention. This study aims to assess the prevalence of anxiety among medical students of fourth year MBBS students of National Medical College and Teaching Hospital, Birgunj, Nepal

## METHODS

A descriptive cross-sectional study was conducted among the medical students of Bachelor of Surgery and Bachelor of Medicine (MBBS) at National Medical College (NMC), Birgunj, Parsa, Nepal. Study unit were students of fourth year MBBS students.

Ethical approval was obtained from institutional review committee of NMC on 13<sup>th</sup> April 2023. (Ref.F-NMC/651/079-080). The study duration was from 20<sup>th</sup> April to 19<sup>th</sup> May in department of community medicine. The interview was taken individually on the basis questionnaire of Hamilton Anxiety Rating Scale (HAM-A). HAM-A scale is a rating scale that was developed to measure the severity of anxiety symptoms. It was one of the first rating scales developed for this purpose and is still widely used today in both clinical and research settings.<sup>7</sup>

HAM-A scale have been widely used to assess the appearance of anxiety. HAM-A contains 14 questions. It is characterized by a set of symptoms and assesses somatic anxiety (physical problems associated with anxiety) as well as psychic anxiety (mental agitation and psychological

discomfort). Each question carries five points; therefore, items are scored from 0 to 4. Responses are scored as 0 (never), 1 (mild), 2 (moderate), 3 (severe), or 4 (extremely serious). Overall, the total HAM-A score is operationally categorized as follows: no anxiety (score of 0–6 points), mild and moderate anxiety (score of 7–13 points), and severe anxiety (score  $\geq 14$  points).<sup>8</sup>

According to a study by Maier et al., Department of Psychiatry, University of Maim, the reliability and concurrent validity of the HAM-A and its subscales were sufficient: there is reasonable inter-rater reliability and good one-week retest reliability. However, the study also found that the HAM-A scale has some limitations, such as the inability to clearly distinguish between anxiolytic and antidepressant effects and strong relationship between the subscale of somatic anxiety and somatic side effects.<sup>9</sup>

Voluntarily willing fourth year students from NMC were included in the study. Data were entered in excel and analyzed in package for the social sciences 20 by measuring HAM-A score, mean values and bar diagrams.

## RESULTS

The total number of MBBS students in fourth year was 98 and response rate was 100%. There were 62 male students 63.3% and 36 were female

students 36.7%. The age of students ranges from 22-27 years with mean age of 24 years and standard deviation of 1.28.

The prevalence of anxiety in the medical student of fourth year was found to be 69 (70.41%). Among them, 64.3% students were in mild and moderate stage of anxiety according to HAM-A but 6.1% of them had severe anxiety while 29.6 % students were well balanced as shown in Figure 1.

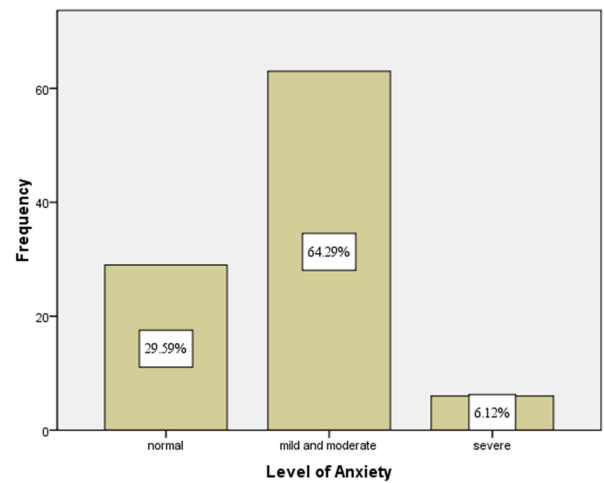


Figure 1: HAM-A anxiety level in fourth year

According to HAM-A well balances students were 29, mild to moderate were 63 and 6 had severe anxiety. Out of the 39 students in the 24-year-old age group, 12 displayed well balanced anxiety, 25 displayed mild to moderate anxiety and 2 with severe anxiety.

In our study the prevalence of anxiety among male students was 53.6% (37) followed by female students 46.4% (32) as illustrated in figure 2.

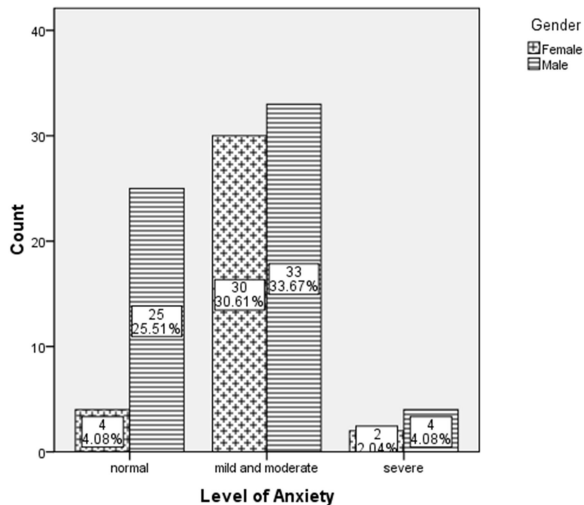


Figure 2: Gender in relation to level of anxiety

Most were Nepalese students 81(82.7%) and 17(17.3%) were Indian students as shown in table 1.

Table 1: Level of Anxiety in respect to country

Country	Normal Number	Mild and Moderate Anxiety Number	%	Severe Anxiety Number
Nepal	24	51	52.04	6
India	5	12	12.24	0

**DISCUSSION**

In fourth-year medical students, the prevalence of anxiety was reported to be 69 (70.41%). Globally mental disorders are increasing; multi-sectoral action plan of Nepal for the prevention and control of

non-communicable diseases (2014-2020) has estimated the 18% of the NCD burden is due to mental illness.<sup>10</sup>

According to a cross-sectional survey, there was a high prevalence of medical students in Pakistan (47.7%), India (66.9%), Nepal (41%), and Egypt (73%), which may be due to the continent's differences and the region's proximity to South East Asia.<sup>11</sup>

In our survey, 52.04% of Nepalese participants reported having mild to high anxiety, and 6.12% reported having severe anxiety. According to a cross-sectional study conducted in Pakistan, mild, moderate, and severe anxiety symptoms were reported by 27.6%, 13.6%, and 6.5% of the students, respectively.<sup>11</sup>

Study done in college of Kathmandu where the prevalence of anxiety in college students was 53.97% among that 28.57% student had mild anxiety, 18.85% had moderate anxiety, and 6.55% had severe anxiety<sup>12</sup> which is similar to our context.

In our survey, 53.6% of male students reported having anxiousness which reflects opposite to the study done in Pakistan, females were more than male twice the rate 40% and 20%,<sup>11</sup> study in Kathmandu showed that female (62.03%) had higher prevalence of anxiety than male student (49.21%).<sup>12</sup> Our results suggest the prevalence of anxiety is higher in male students than female.

According to data from Udayana University of Bali, over half of the impacted students—55.8% were female, and the remaining 44.2% were male.<sup>13</sup> These results were also consistent with the study.

According to the study “Barriers to help-seeking in medical students with anxiety at the University of South Carolina School of Medicine Greenville” the causes of anxiety were high levels of scholastic pressure, money worries, exposure to death and dying, and lifestyle stresses including lack of sleep and inactivity owing to time constraints are all factors that contribute to increased levels of anxiety.<sup>14</sup>

#### LIMITATIONS

Concern over anxiety in medical students is growing. Nonetheless, the timing of the evaluation is crucial for certain participants. Everyone was at ease.

#### RECOMMENDATIONS

The well-being of students is of utmost importance. Counseling and guidance play crucial roles in helping affected students navigate challenges. It's essential that concerned authorities provide supportive resources and empathetic assistance to help students cope with their difficulties.

#### CONCLUSIONS

The prevalence of anxiety among medical students of National Medical College was found to be high. Males anxiety rate were more than females. Affected students should be provided with proper measures by the concerned authorities.

**Conflict of Interest:** None

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