# Anxiety and depression among students of AL-Mustansiriyah University /College of Medicine

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**Abstract**

**Background:** Medical students repeatedly experience different stresses which made them more vulnerable to psychological problems that may affect their emotional, psychosocial, physical and academic performance.

**Objectives:** To determine the rate of anxiety and depression among medical students in Al- Mustansiriyah University. Find out the influence of gender, school year and some life events on the likelihood of development anxiety and depression.

**Subjects and method:** A cross-sectional study was conducted in Al- Mustansiriyah University, College of Medicine from 1st of March to 10th of May 2015. The study sample comprises 300 students from all the six school years. Self-administered questioners were used for data collection. The Hospital Anxiety and Depression scale (HADS), was used to assess the presence of anxiety and depression among the students enrolled in the study.

**Results:** The study results showed that the overall rates of anxiety and depression with various degrees among students were (77%, 61.6%) respectively. Male students had higher overall rate of anxiety (80.1%) than the females' students (74.86%), while the female students had higher overall rate of depression (64.2%) than the male) 57.85%).

The highest score of anxiety was observed among third year's students (54.4%), as compared to other school years, while higher score for depression was recorded among the first-year students (23.1%).

Students who were failed in last academic year were more prone for both depression and anxiety. Those who were displacing from their homes were more likely to be depressed.

**Conclusion:** A considerable part of Al- Mustansiriyah College of Medicine students were suffering from psychological disorders (anxiety and depression).

**Key Words:** Anxiety, depression, medical students, Al-Mustansiriyah University, College of Medicine.

## Introduction:

Mental health is regarded as an essential component of health by the World Health Organization [1]. Mental illness affects people in all occupations, education levels, socioeconomic conditions, and cultures [2]
Psychological health disturbance, including depression, anxiety and stress, are common and well documented worldwide. Medical students have been found to experience higher levels of anxiety and depression when compared to the general population and to their same age peers [3, 4]. Undergraduate medical education comprises strenuous study and training for 5-6 years. The curricular objectives are dynamic due to expanding knowledge, skill, and attitudes in order to prepare themselves to deal with life - long professional challenges independently. Unfortunately, some aspects of the training process have unintended negative consequences on students' physical and emotional health [5, 6].
The sources of stress are based on three main areas: academic pressures, social issues and financial difficulties. The majority of stressful conditions were found to be related to medical training rather than personal problems. Depression and anxiety were found to be associated with workload, fears of failing, personal endurance, lack of time for other activities. [7-9]
Anxiety and depression have very high cost to individual and society, including medical school dropout, suicide, degeneration of relationship, marital problems, and impaired ability to work effectively [10].
Mental problems in medical students are usually under diagnosed because of their concern for stigma and its unintended influence on their academic and career evaluation. Medical students as future health care providers need special supports for improvement and protection of their mental health status. [11]. Previous studies revealed that prevalence of anxiety and depression among medical students was about 25% [12, 13].

The current study was conducted aiming to define the rate of anxiety and depression among students in Al- Mustansiriyah University College of Medicine and to find out the influences of gender, school year and life events on the likelihood of development anxiety and depression.

## Subjects and method:

A cross- sectional study was conducted in Al-Mustansiriyah University, college of medicine over the period from 1st of March to 10th of May2015. All the students from all six school years of the college were considered for study population.

The sample size was calculated using the following formula

$n = Z^2 Pq/d^2$

The calculated sample size was 287.3 ≃ 300. According to student administration unit, the total number of students in college of medicine for the academic year 2014/2015 was 1017 students. A proportional stratified sampling technique was used. The number of students from each school year involved in total study sample was in proportion to the total number of students of that school year.

Data were collected via a self –administered questionnaire. Filing out the questionnaire was considered as a declaration of willingness to participate. To ensure anonymity, the students were asked not to put names on the questionnaire. A questionnaire form comprised two parts. Part one covered some socio-demographic characteristic of the participants and some life events during last six months prior to the study.

Part two consist items of the Hospital Anxiety and Depression scale (HADS)[14], which was used to assess the anxiety and depressive symptoms of the students. The HADS required the individuals to respond to the question in relation to how they felt in the past week. HADS consist of; seven items related to Anxiety and seven items related to Depression.

The responses being scored on a scale of 0-3 (3 indicate higher symptom frequency). The total scores for each subscale (anxiety or depression) range from (0 -21).

The scores categorized as follows: (0-7) regard as normal. (8-10) border lines abnormal and (11- 21) abnormal. Accordingly, each participant was classified as normal, borderlines; abnormal depend on his/her scores [15, 16].

**Statistical analysis:**

Data were analyzed using Statistical Packages for Social Sciences (SPSS), version 22. The data were presented as frequency and percentages in forms of tables and figures.

**Results**:

Among 300 students enrolled in the study; 179 (59.7 %) were females and 121 (40.3%) were males. The mean age of the students was 21.4 years (± 2.1).

According to HADS, 231 (77%) of the students had anxiety, among them 153(51.0%) were classified as abnormal level of anxiety (Fig-1).

The overall rate of depression among the study participants was 61.6 % and 45.3% of them were consider as border line level of depression according to HADS (Fig-2). Table -1 presented the distribution of students according to level of anxiety and gender. It showed that the rate of anxiety among male students was 80.2% which was higher than that among female students (74.9%). More than half of male students (56.2 %) who had anxiety were classified as abnormal level according to HADS.

Regarding the school year, table -2 documented that the highest overall rate of anxiety (84.2%) was detected among third year students followed by the second year students (79.2%). The lowest rate of anxiety was observed among sixth year students (71.7%).Furthermore, the3rd and 2rd year students reported a higher score for anxiety, with rate of (54.4% and 54.2%) respectively.

Table-3 demonstrated the life events in the last 6 month and level of anxiety. Failure in the last year was the life event with the highest rate of various level of anxiety (87.5%), followed by illness of family member or students themselves (74.5%). These two events were also leading the students to develop higher score of anxiety (68.8% and 53.2%) respectively.

Table-4 illustrate the distribution of study group according to gender and level of depression. From total females students enrolled in the study, 64.3% of them had different level of depression in comparison with 57.9% of male students.

Table-5 shows the distribution of study group according to school year and level of depression. 3rd year students had the highest overall rate of depression (75.4%), while highest rate of abnormal level of depression was recorded among1st year students (23.1%).

The distribution of students according to the level of depression and some life events illustrated in table 6. The highest rate of depression (75%) was recorded among the students who were failed in last year, 56.2% of them were classified as border level of depression according to HADS scale, on other hand the severe form of depression was reported by 20.7% of students who were displaced.

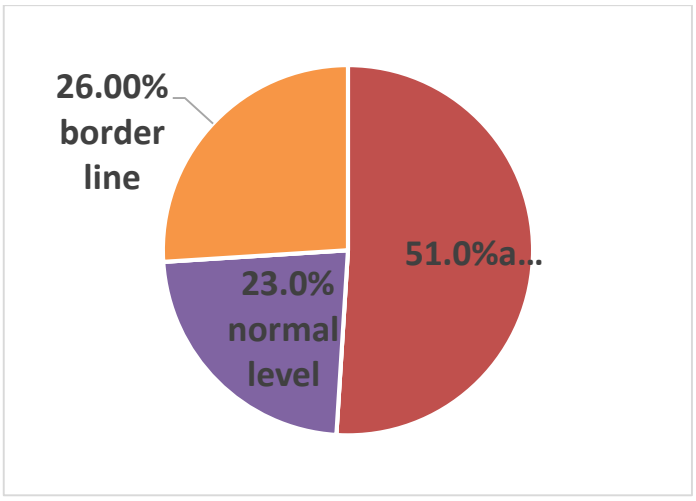


**Figure 1: The distribution of study group according to levels of Anxiety based on HADS.**

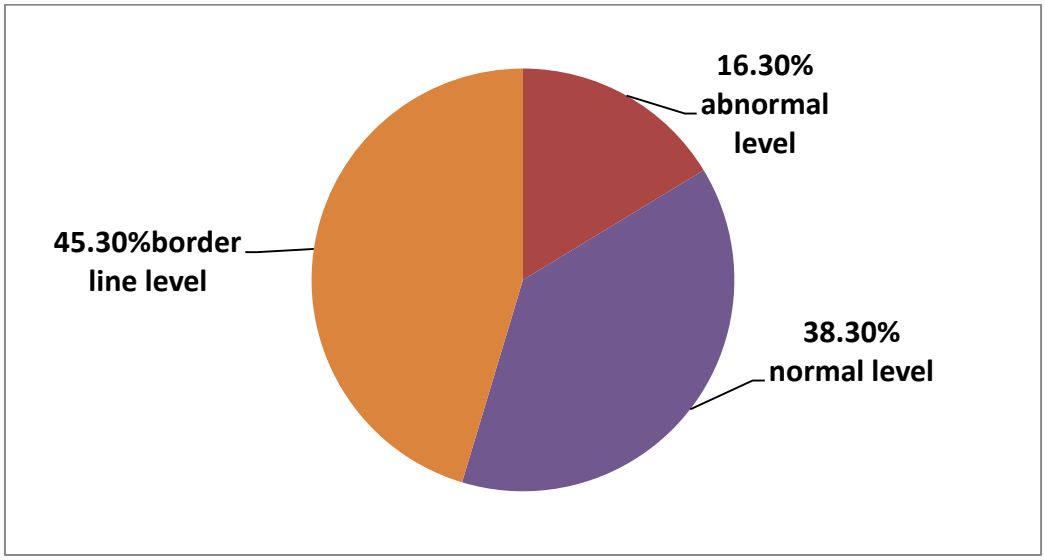


**Figure2: The distribution of study group according to levels of Depression based on HADS**

**Table -1The distribution of students according to gender and level of anxiety. n=300**

| Gender | Anxiety levels | | | | | |
|---|---|---|---|---|---|---|
| | Abnormal | | Borderline | | Normal | |
| | No. | % | No. | % | No. | % |
| Male | 68 | 56.2 | 29 | 24.0 | 24 | 19.8 |
| Female | 85 | 47.5 | 49 | 27.4 | 45 | 25.1 |

**Table-2 The distribution of study group according to school year and level of anxiety. n=300**

| | Anxiety levels | | | | | |
|---|---|---|---|---|---|---|
| | Abnormal | | Borderline | | Normal | |
| | No. | % | No. | % | No. | % |
| School years | | | | | | |
| 1 | 15 | 38.5 | 14 | 35.9 | 10 | 25.6 |
| 2 | 26 | 54.2 | 12 | 25.0 | 10 | 20.8 |
| 3 | 31 | 54.4 | 17 | 29.8 | 9 | 15.8 |
| 4 | 28 | 52.8 | 13 | 24.5 | 12 | 22.6 |
| 5 | 22 | 51.2 | 10 | 23.3 | 11 | 25.6 |
| 6 | 31 | 51.7 | 12 | 20.0 | 17 | 28.3 |

**Table -3: The life events in the last 6-month and level of Anxiety.n=300**

| | Anxiety levels | | | | | |
|---|---|---|---|---|---|---|
| | Abnormal | | Borderline | | Normal | |
| | No. | % | No. | % | No. | % |
| Life event | | | | | | |
| Death of 1st degree relative or close friend | 11 | 37.9 | 8 | 27.6 | 10 | 34.5 |
| Displacement | 27 | 46.6 | 15 | 25.9 | 16 | 27.6 |
| Illness of family member or himself | 25 | 53.2 | 10 | 21.3 | 12 | 25.5 |
| Failed last year | 11 | 68.8 | 3 | 18.8 | 2 | 12.5 |

**Table-4: The distribution of study group according to gender and levels of depression n=300**

| Gender | Depression levels | | | | | |
|---|---|---|---|---|---|---|
| | Abnormal | | Borderline | | Normal | |
| | No. | % | No. | % | No. | % |
| Male | 22 | 18.2 | 48 | 39.7 | 51 | 42.1 |
| Female | 27 | 15.1 | 88 | 49.2 | 64 | 35.8 |

**Table-5: The distribution of study group according to school year and level of Depression. n=300**

| | Depression Levels | | | | | |
|---|---|---|---|---|---|---|
| | Abnormal | | Borderline | | Normal | |
| | No. | % | No. | % | No. | % |
| School years | | | | | | |
| 1 | 9 | 23.1 | 15 | 38.5 | 15 | 38.5 |
| 2 | 10 | 20.8 | 18 | 37.5 | 20 | 41.7 |
| 3 | 10 | 17.5 | 33 | 57.9 | 14 | 24.6 |
| 4 | 9 | 17.0 | 21 | 39.6 | 23 | 43.4 |
| 5 | 5 | 11.6 | 21 | 48.8 | 17 | 39.5 |
| 6 | 6 | 10.0 | 28 | 46.7 | 26 | 43.3 |

**Table-6: The distribution of students according to level of depression and some life events in the**

| | Depression levels | | | | | |
|---|---|---|---|---|---|---|
| | Abnormal | | Borderline | | Normal | |
| | No. | % | No. | % | No. | % |
| Life event | | | | | | |
| Death of 1st degree relative or close friend | 5 | 17.2 | 14 | 48.3 | 10 | 34.5 |
| Displacement | 12 | 20.7 | 24 | 41.4 | 22 | 37.9 |
| Illness of family member or himself | 3 | 6.4 | 23 | 48.9 | 21 | 44.7 |
| Failed last year | 3 | 18.8 | 9 | 56.2 | 4 | 25.0 |

**Discussion:**

The study results showed that the overall rates of anxiety and depression among medical students enrolled in the study were 77%, 61.6% respectively, such high rates of anxiety and depression were also recorded in previous studies conducted in Kingdome Saudi Arabia [7], and Egypt [17, 18], where the rates of anxiety ranged between (60-64.3%), while the rates of depression were between (60.2%, 78.4%).

The reasons for high rates of anxiety and depression among medical students are multifactorial and include alteration to enormous size of information, competition and fear of failure in their studies. In addition to the genetic and other environmental factors that arise unrelatedly of the education stress. [19].

The current study showed that males' students recorded higher scores for anxiety than females, this finding was contradicting many literatures from Saudi Arabia [7], Egypt [18], Pakistan [20], and Malaysia [21] that reveled anxiety was more among female students than males. While a higher rate of depression was observed among female students. Same result was reached by other previous studies [22-24].

Higher rate of anxiety was observed among students of the third year. This might be due to that third year students facing excessive load of both Para clinical and clinical subjects as compared to only clinical subjects in later years. Such result was aligned with previous studies from Saudi Arabia [7], UAE [25], and Thailand [26], which stated that the rate of anxiety was higher among third year students.

Upon entering medical school, students are confronted with a different environment and experience high academic stress [ 27] .This could be contributed to the predominance of depression seen in first year medical students in the current study .Similar trends have been perceived in studies from Sweden [28] and India [29].

The majority of medical students place academic performance as their primary focus, consequently academic failure had a considerable link with depression and anxiety in medical students [27]. This was parallel to the results seen in the present study. The embarrassment accompanied with poor academic performance may be a contributing factor [27].

Even though the number of displaced students was very small only (58) from the total study group, but they experienced high rate of abnormal level of depression in comparison with other students, this finding was expected due to fact as consequences of displacement they were expose to violent, impoverishment, and poor living condition.

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