



ORIGINAL ARTICLE

Prevalence of anxiety and depression among medical and pharmaceutical students in Alexandria University



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Abstract *Introduction:* Depression and anxiety in the community are considered as specific indicator for mental status of a person and various studies have documented anxiety and depression among medical and pharmaceutical students.

Objective: In this study, the prevalence of anxiety and depression was measured among medical and pharmaceutical students in the Alexandria University.

Methods: Students from both faculties were asked to complete both Beck depression inventory and Beck anxiety inventory.

Results: In Faculty of Medicine, with total number of 164 students, the prevalence of anxiety and depression was found to be 43.9% and 57.9%, respectively, based on the cut-off points of both questionnaires.

In Faculty of Pharmacy, with total number of 164 students, the prevalence of anxiety and depression was found to be 29.3% and 51.1% respectively, based on the cut-off points of both questionnaires.

Conclusion: The study revealed significant distress among both medical and pharmaceutical students. Moreover, it was concluded that the prevalence of anxiety and depression in Faculty of Medicine was found higher than that in Faculty of Pharmacy. Furthermore, it was noticed that the prevalence of symptoms was higher among females.

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1. Introduction

Anxiety and depression are worldwide problems which reflect the mental health of the population. A lot of researches reported anxiety and depression among medical students specially in their first academic year as they are going to suffer from academic stressors such as information input overload, lack of leisure time and academic evaluation (exams and

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continuous assessments), for many students depression stimulates feeling of fright, lack of ability, anger and can be associated with psychological and physical morbidities.^{1,2}

Increase in levels of anxiety and depression³⁻⁵ may have a negative effect on proficiency of academic study program, courses suggested by schools such as (deteriorating clinical practice and stress induced disorders)⁶ plus it will affect the society economically^{7,8} in addition patients care is affected by psychological distress among physicians such as (Poor communication, diminished quality of care and medical errors have been found to be associated with physical stress).^{9,10}

Gender differences in anxiety and depression have been found in both practicing and newly qualified physicians, which mirrors epidemiological studies indicating that depression is more common among women than men.¹⁷ Most, but not all, studies conducted among medical students, using various instruments, show a similar pattern.¹²⁻¹⁵

The prevailing view is that anxiety and depression rise during undergraduate medical education and this rise is more pronounced among women.¹⁶⁻¹⁸

Our purposes in this study are:

- (a) Describing the prevalence of anxiety and depression among first year medical students in Faculty of Medicine and Faculty of Pharmacy in the Alexandria University.
- (b) Comparing prevalence of both anxiety and depression among both faculties.
- (c) Comparing gender differences of both anxiety and depression among a representative sample of both faculties in the Alexandria University.
- (d) Comparing our findings with other studies either in the Middle East or in the western countries.

This study may help in designing appropriate intervention strategies to enhance the learning abilities which will improve the patient care by achieving good communication, increasing quality of care and decreasing medical errors in addition to burden the costs paid by the society through anxiety and depression attenuation.

2. Materials and methods

2.1. Study population

The medical course at the Alexandria University, which is the main and only governmental university in Alexandria, consists of two components; the first one is the core science component, which is the first three years. During this period, students study core medical science, and the other one is the clinical component, the next three years. During this period, the curriculum focuses mainly on clinical subjects and skills. Around 1400 students, typically aged 18–19 years, enter Year 1.

While in Faculty of Pharmacy, the course comprises only 1 year core science (Year 1) and 4 years biomedical, pharmaceutical and clinical sciences.

A cross sectional study was conducted in Faculty of Medicine and pharmacy in the Alexandria University of Egypt, in March 2013, among the first academic year students, who had spent more than six months in their schools. This was after the mid-year vacation. These students were selected randomly.

2.2. Sample size determination

According to student affairs administration in each faculty, the total number of registered students in 2012/2013, in the first academic year was 1376 and 1454 of both sexes, in the Faculty of Medicine and pharmacy respectively.

Sample size was calculated using the G power 3.010 statistical tool. Previous studies revealed that prevalence of depression among medical students was moderate (about 25%). thus effect size was used as .3, alpha error was used as 0.05, power was used as 0.95 and degree of freedom was used as 1. The calculated sample size was 145. Thus in this study a number greater than 145 was used, in a part to overcome the sampling error (328 students).

2.3. Methods

The selected students were personally contacted, informed of the questionnaire, aims, advantages and disadvantages of the study, and asked to take part in the study. Confidentiality was ensured, and they were informed that their results will be sent to them through emails. All the students were contacted directly in and after the end of their classes. They were informed that filling in the questionnaire will not take more than fifteen minutes of their time. Filling in the questionnaire was completely optional for all the students. The study was held in the mid semester, to ensure that the students were not undergoing any stress related to final exams.

The twenty-one-item Beck anxiety inventory (BAI) and the twenty-one-item Beck depression inventory (BDI) were our tools to measure anxiety and depressive symptoms of the students. BAI and BDI were created by Dr. Aron T. Beck.^{19,20}

Beck depression inventory (BDI) is a twenty-one-multiple-choice question self-report inventory. Each question has four possible answers. Each answer is given a score from zero to three, indicating how much the symptoms are severe. It is considered as one of the best used tools to assess depression and predict its severity. The questionnaire is best used for persons aged thirteen or more. BDI measures mood, pessimism, sense of failure, self-dissatisfaction, guilt, punishment, self-dislike, self-accusation, suicidal ideas, crying, irritability, social withdrawal, body image, work difficulties, insomnia, fatigue, appetite, weight loss, bodily preoccupation, and loss of libido. Items one to thirteen measure symptoms that are psychological in nature, while items fourteen to twenty-one measure more physical symptoms.

BDI scores were categorized into normal (1–10), mild mood disturbance (11–16), borderline clinical depression (17–20), moderate depression (21–30), severe depression (31–40) and extreme depression (more than 40).

Beck anxiety inventory (BAI) is a twenty-one-multiple-choice question self-report inventory. It measures common symptoms of anxiety (such as numbness and tingling, sweating not due to heat, and fear of the worst happening). The questionnaire is best used for persons between the ages from seventeen to eighty years. Each question has four possible answers like that of BDI. The questions are arranged in columns and the students were asked to mark against the appropriate answer.²⁰ The possible answers are: Not at all which takes 0 point, mildly (It did not bother me much) which takes 1 point, moderately (It was very unpleasant, but I could stand it) which

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