

## Comparison of Depression and Anxiety Disorders among Native and Non-native Students of Islamic Azad University of Medical Sciences in Tehran

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### Abstract

**Introduction:** Depression is one of the most common psychological problems which is not limited to a specific place or time, and involves people of different social classes and age groups. Anxiety may even cause physical illnesses such as blood pressure and cardiovascular disease, as well as psychiatric disorders such as depression. The aim of this study was to compare the level of depression and anxiety in native and non-native medical students.

**Methods:** In this cross-sectional study, 21,800 students of the faculties of Islamic Azad University of medical sciences of Tehran were assessed for eligibility. A number of 280 students were selected. The Beck depression and anxiety questionnaires were used to prepare the items of the study.

**Results:** Among the sample of 280 students, 184 students were female, of which 160 were native and 24 were non-native. Also 98 students were male, of which 38 were native and 60 were non-native students. Also 116 students (41%) were in normal condition in terms of depression degree, 103 students (36%) had mild depression, 48 students (17%) had moderate depression, and 13 students (4%) suffered from major (severe) depression. Also, the results of the anxiety test indicated that 121 students (43%) were in the healthy condition, 100 students (35%) had mild anxiety, 43 students (15%) had moderate anxiety, and 16 students (5%) suffered from severe anxiety.

**Conclusion:** Findings of the present study show that there is no significant difference between depression and anxiety scores between native and non-native students.

**Keywords:** Depression; Anxiety; Students; University

### Introduction

Depression is one of the most common neurological problems which is not limited to a specific place or time, and involves people of different social classes and age groups [1]. However, its prevalence varies regarding age, sex, and social group [2]. This psychiatric disorder has existed even centuries ago, with the difference that some predecessors such as Hippocrates, who called the disorder "Melancholy", considered depression as a disease, and some others merely as

a natural reaction to life [1, 3]. After cardiovascular and respiratory diseases, depression is the third most common cause of danger to human health [4].

Since students are among the talented strata of each community, paying attention to their mental health is of great importance [5, 6]. University students are heavily prone to depression and anxiety due to their passage through the teenage years and entering to a new phase of life and their changing roles in the society; this period is accompanied by some issues

which may disturb their mental relaxation, including the economic, family, and personal problems, students' lack of familiarity with the environment of the university early on their arrivals, separation from the family, lack of sufficient facilities and amenities, etc. Anxiety may even cause physical illnesses such as blood pressure and cardiovascular disease, as well as psychiatric disorders such as depression [6]. Depression does not belong to a particular stratum, but some people are more vulnerable to these types of disorders because of their specific status [7]. In the case of students' lives, anxiety and depression is very different from the rest of the strata in a society, because students' tool for learning is their mind and any mental disorder can affect their mental performance. In addition, students usually live in the dormitories, and naturally their problems may affect other students' lives [5]. Besides their influential role as the workforce experts in the future of a society, university students will be responsible for educating and training the next generations, and in this way, they are directly involved in the advancement and perfection of future generations [6, 8].

According to previous studies conducted in this area, the destructive effects of anxiety and depression in the nervous system not only may cause disruption in the fields of employment, education and marriage, but also may have some other consequences like cardiovascular disease, cancer, and diabetes [9, 10].

Yet, other studies show that the destructive effects of depression and anxiety are far beyond the mentioned ones and they can also bring about some serious consequences such as suicide and smoking [10, 11]. Recent findings suggest that there is a significant relationship between the depression and anxiety and smoking, and this issue becomes more serious when we find that this correlation is very high among the university students [11]. A remarkable point in a recent report of WHO (World Health Organization) is that the suicide is the second leading cause of death among the young people at the age range of 15 to 29 [12]. According to this report, more than 300 million people (with different age range) in the world suffer from depression, and unfortunately, the outbreak of this disorder and other psychiatric disorders are in-

creasing in the world [12]. In addition, according to the Health Profile of Iran, published on the website of the World Health Organization (WHO), in terms of the neurological and psychiatric condition of the country's population, Iran has been ranked second in terms of the burden of mental disorders by 2012 [13]. Therefore, given the destructive consequences of this disorder, today, more than anything else, there is a need for precise, preventive and therapeutic planning to deal with the risk of the prevalence of these mental disorders, and this cannot be achieved unless by researching and evaluating the rate of depression and anxiety and related disorders among the different strata of the society.

As already mentioned, given the importance of the university students in terms of their future roles and responsibilities in each community, it is obvious that studies in the field of depression and anxiety should give priority to this stratum and consider their mental health.

Considering the above mentioned issues, the general purpose of this study was to compare the level of depression and anxiety in native and non-native medical students; however, the study also aimed to investigate the degree of depression, as well as the level of anxiety, in each of these groups.

## Patients and Methods

In this cross-sectional study, 21,800 students of the faculties of Islamic Azad University of medical sciences of Tehran were assessed for eligibility. A number of 280 students were selected from this population using the Cochran's formula. Of these, about 30% (84 students) were non-native and 70% (196) were native students, and these ratios were statistically derived from university officials according to the total number of registered students. The students were selected randomly, and among the students of all faculties of the university. The inclusion criterion was that the participant should be a student at the Tehran Azad University of Medical Sciences at the time of conducting the study.

The required data were collected using a questionnaire consisting of 42 questions including two parts; the first part consisting of 21 questions on the mo-

rale of the subjects, and the second part contains 21 questions about the student's physical condition. The questionnaires were handed in to the participants by the researchers of this study using two ways; first, attending the campus or dormitories around the campus and handing out the questionnaires to the participants and second, through the online questionnaire. Meanwhile, to go to the dormitories, permission was already received from the dormitory staff.

The Beck depression and anxiety questionnaires were used to prepare the items of the questionnaire; the validity and reliability of Beck's questionnaire has been proven in numerous studies in Iran. The questionnaire included individual information such as age, gender, field of study, being a student at Tehran Azad University of Medical Sciences or not (for online questionnaires), being native or non-native, academic satisfaction, life condition, physical and psychological status, and their views on the current situation of life as well as their future perspectives.

To assess the level of depression and anxiety, the scoring method used in the BDI was applied, and the total scores were summarized as follows:

- The total of 0 to 13 (no or the lowest degree of depression)
- The total of 14 to 19 (moderate depression)
- The total of 20 to 28 (severe depression)
- The total of 29 to 63 (major depression)

The collected data were analyzed using the SPSS software version 23 and in order to find the mean scores of depression in native and non-native students based on the quantitative variables, the standard deviation was applied. Finally, the tests of chi-square, student's t-test, One Sample Kolmogorov-Smirnov Test, correlation, and regression were applied for the data analysis.

## Findings

In this study, among the sample of 280 students, 184 students were female, of which 160 were native and 24 were non-native. Also 98 students were male, of which 38 were native and 60 were non-native students.

According to the results of figure 1, 116 students (41%) were in normal condition in terms of depression degree, 103 students (36%) had mild depression, 48 students (17%) had moderate depression, and 13 students (4%) suffered from major (severe) depression.

Also, the results of the anxiety test indicated that 121 students (43%) were in the healthy condition, 100 students (35%) had mild anxiety, 43 students (15%) had moderate anxiety, and 16 students (5%) suffered from severe anxiety.

Based on the obtained results from the statistical data, the relationship between the depression, anxiety and gender was significant ( $p=0.042$ ). Accordingly, the mean score of depression was  $12 \pm 8$  in men and  $12 \pm 9.02$  in women, and mean score of anxiety was  $11 \pm 9.02$  in men and  $12 \pm 8$  in women.

Also, based on the results, the p-value taken from the relationship between the students' degree of depression and anxiety level was less than 0.001.

The mean score of depression was  $13 \pm 9$  for native students and  $12 \pm 8$  for non-native students ( $p=0.83$ ). The mean score of anxiety was  $12 \pm 8$  for native students and  $12 \pm 9$  for non-native students ( $p=0.124$ ). Based on the analysis of the statistical data, despite the gender effect on the degree of depression and anxiety, this effect was not significant ( $p=0.042$ ).

## Discussion

According to the findings, the level of depression and anxiety in female students is higher than that of in male students; this finding is consistent with the results of studies done by Ahrari et al. [14] and Rashidi [15] in Gonabad, Ghorbani et al. [16] in Isfahan, and Ildarabadi et al. [17] in Zabul.

The results of investigating the relationship between the students' academic major and their level of depression and anxiety indicated that the degree of depression and anxiety is associated with the type of students' major, that is to say that majoring in the higher-level fields of study has a significant effect on reducing the depression and anxiety levels; as the degree of depression and anxiety in non-medical students was higher than that of medical students.

According to the obtained p-value for the relation-

ship between being a native and non-native student and the degree of depression and anxiety suggested that this variable has no effect on the students' levels of depression and anxiety. Therefore, our hypothesis, stating that non-native students have higher levels of depression and anxiety compared to the native students due to some reasons such as being away from the family and friends, lack of welfare facilities, economic problems, etc., was rejected.

Although, the results showed that the depression level of the native group was slightly higher than that of the non-native group, the level of anxiety did not differ significantly in the two studied groups. This confirms the findings of Ilderabadi et al. [17] in Zabul, which cited the increased prevalence of depression in native students because of their social-cultural restriction. Also, in the studies conducted by Sharifi et al. [18] and Gilavand et al. [8], no significant difference was found between the depression levels of the native and non-native students.

Among the limitations of this study are the lack of cooperation of some dormitories within the campus, and the mental state of individuals when completing the questionnaire. The second factor can be very effective in answering the questions, as some students may affect the accuracy of the findings given their mental state while filling out the questionnaire, as well as spending insufficient time to complete this questionnaire. Another remarkable point that may affect the results is that people act very cautiously when expressing their psychological state and they may not answer the questions honestly.

It is recommended that in further studies, effective factors which are likely to be involved in the degree of depression and anxiety, such as the economic status, family culture, social status, etc., be considered and investigated to obtain more accurate and valid results in this regard.

**Conclusion:** Findings of the present study show that there is no significant difference between depression and anxiety scores between native and non-native students.

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**Authors' Contributions:**

EA designed the study and drafted the manuscript. FH, PN and SNS helped in manuscript drafting and analysis. All authors have approved the final version of manuscript.

**Conflict of Interest Disclosures:**

There are no conflicts of interest in terms of the present manuscript.

**Ethical approval/Consideration:**

A written informed consent was taken from the participants. Their information would be kept confidential and if they were interested in knowing the interpretation of their results, they were informed about it. No cost posed to the participants for their participation in this study.

**Table 1.** Demographic information and test score of study individuals

	Gender	Native	Non-native	p value
	Female	160 (80.0%)	24 (28.0%)	0.082
	Male	38 (19.0%)	60 (71.0%)	
<b>Age</b>	21.0 ± 2.0	22.0 ± 2.0	0.004	
<b>Academic Degree</b>	M.D.	22 (11%)	9 (10%)	< 0.001
	Bachelor	176 (88%)	75 (89%)	
<b>Depression Score</b>	13.0 ± 9.0	12.0 ± 8.0	0.830	
<b>Anxiety Score</b>	12.0 ± 8.0	12.0 ± 9.0	0.124	

**Figure 1.** Depression and anxiety level in native and non-native group

naire

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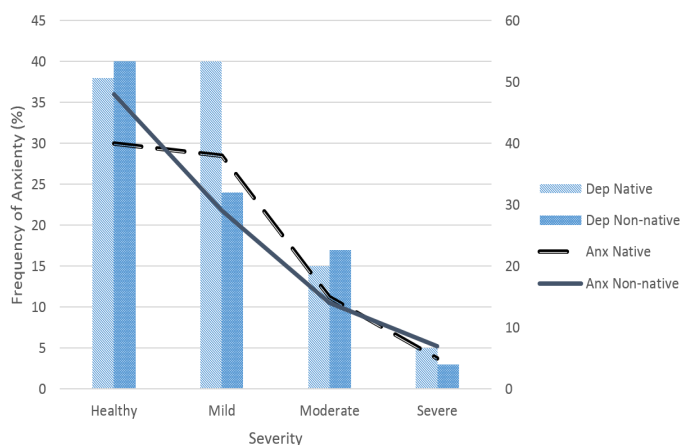


Figure 2. Radar plot: Mean anxiety score in native and non-native groups according to Beck questionnaire

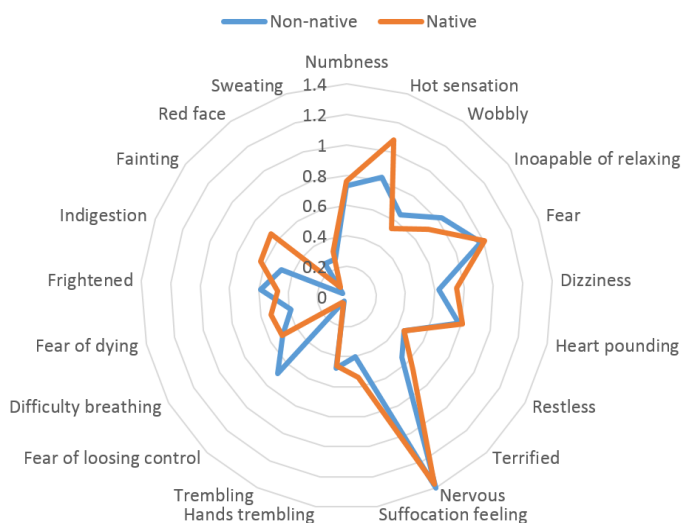


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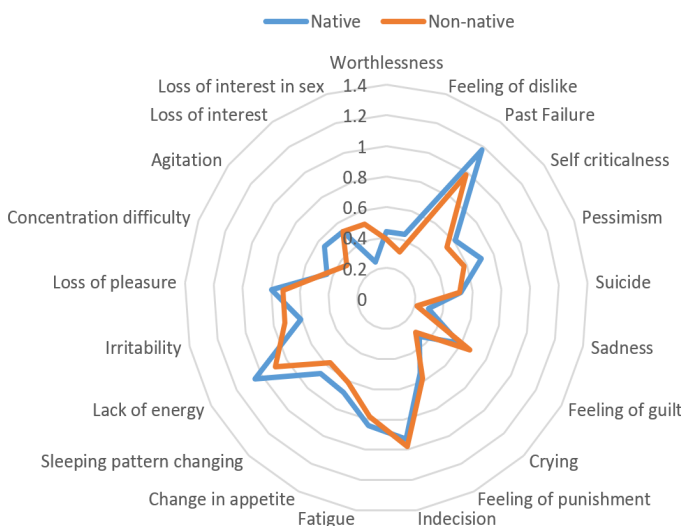


Figure 3. Radar plot: Mean depression score in native and non-native groups in according to Beck questionnaire

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