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Assessment Of Anxiety Related To Osce Exam Among Alzaeim Al-Azahari University Medical Students 2022

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Abstract

Introduction:

This study to gather information about the Incidence rate of severe anxiety before and during OSCE exam among medical students and detect the risk factors for it, in order to increase the awareness level of medical students' community about the effects of anxiety before and during exams on their academic achievement.

Methodology:

a cross-sectional study was done in medical students at AAU in fifth year

The results:

A total 211 sample was collected, 48.3% were male while 51.7% were female. 53.6% of participants age from 20 to 23 while 46.4% age from 24 to 26.

79.6% of participants believe that the anxiety and fear caused by your fear of forgetting the information, while 20.4% of participants don't believe that. 75.4% of participants believe that anxiety because of the lot to comprehend and less time to practice while 24.6% don't believe that.

93.8% of participants get an anxiety episode because of the examiner and how he is treating participants,

Conclusion :

97.2 %. of students reported feeling anxious throughout the OSCE exam, There was no collaboration between the examiner and the student which made students more anxious. The time in not enough for every station.

We recommended students to adpot healthy & effecive mean of relaxation like yoga, breathing exercises and non formal counseling

Background

Anxiety disorders are real, serious medical conditions - just as real and serious as physical disorders such as heart disease or diabetes. Anxiety disorders are the most common and pervasive mental disorders in the United States [1]

Generalized Anxiety Disorder (GAD) is characterized by persistent and excessive worry about several different things. People with GAD may anticipate disaster and may be overly concerned about money, health, family, work, or other issues. Individuals with GAD find it difficult to control their worry. They may worry more than seems warranted about actual events or may expect the worst even when there is no apparent reason for concern.

GAD is diagnosed when a person finds it difficult to control worry on more days than not for at least six months and has three or more symptoms. This differentiates GAD from worry that may be specific to a set stressor or for a more limited period.

GAD affects 6.8 million adults, or 3.1% of the U.S. population, in any given year. Women are twice as likely to be affected. The disorder comes on gradually and can begin across the life cycle, though the risk is highest between childhood and middle age. Although the exact cause of GAD is unknown, there is evidence that biological factors, family background, and life experiences, particularly stressful ones, play a role.

Sometimes just the thought of getting through the day produces anxiety. People with

GAD don't know how to stop the worry cycle and feel it is beyond their control, even though they usually realize that their anxiety is more intense than the situation warrants. All anxiety disorders may relate to a difficulty tolerating uncertainty and therefore many people with GAD try to plan or control situations. Many people believe worry prevents bad things from happening, so they view it is risky to give up worry. At times, people can struggle with physical symptoms such as stomachaches and headaches.

When their anxiety level is mild to moderate or with treatment, people with GAD can function socially, have full and meaningful lives, and be gainfully employed. Many with GAD may avoid situations because they have the disorder or they may not take advantage of opportunities due to their worry (social situations, travel, promotions, etc.). Some people can have difficulty carrying out the simplest daily activities when their anxiety is severe.

Test anxiety has been defined as the emotional, physiological, and behavioral responses surrounding the potential consequences of negative evaluation on an upcoming test or exam. Recent work by Lowe and colleagues suggests that biopsychosocial factors, including biological (e.g., physiological arousal), psychological (e.g., emotional or cognitive factors), and social (e.g., parent pressure), contribute to development and expression of test anxiety. In association with these factors, students with test anxiety exhibit interfering thoughts, feelings, or off-task behaviors in testing situations that are perceived to be personally relevant.

Additionally, when a test-anxious student perceives a test to be threatening and performs less than optimally, that student's maladaptive cognitions are reinforced and test anxiety increases. It has been estimated that between 10% and 40% of all students suffer from various levels of test anxiety, and students with disabilities, women, and minority students report higher rates of test anxiety. Test anxiety has been reported to onset as early as age 7, and when present, test anxiety is a disruptive factor in students' academic careers. Students with high levels of test anxiety perform lower on tests and have lower overall academic achievement as measured by grade point averages [2]

Medical schools around the world aim to train and produce competent and empathetic physicians to help the sick, advance medical knowledge, and promote public health. However, medical education is one of

the most academically and emotionally demanding training programs out of any profession, and consequently, the time and emotional commitment necessary for medical students to devote to their training is extensive. Such demands and stress cause a negative effect on the students' psychological well-being, and can precipitate

is often undetected and undertreated in the general population. In addition to intense feelings of fear or panic, sufferers of anxiety can experience other physiological symptoms including fatigue, dizziness, headaches, nausea, abdominal pain, palpitations, shortness of breath, and urinary incontinence.

Anxiety can also impair goal-directed attention and concentration, working memory, and perceptual-motor function, all of which are important domains which enable medical students and physicians to provide safe and efficacious medical care to patients [3].

The OSCE was a most anxiety-provoking assessment method and students prepared more for the OSCE than for the other examinations. The expectation to succeed was also higher for the OSCE. State anxiety during the OSCE was associated with the level of preparation but not with scores obtained. Medical education exposes students to a highly stressful environment. Numerous reasons have been attributed, however OSCE and examinations are amongst the top stressors related to anxiety being experienced by the graduating students. Here on Sudan, there is no reliable data and reports about the association of test anxiety on OSCE performance, So This study is necessary to gather information 1

bout the Incidence rate of severe anxiety before and during OSCE exam among medical students and detect the risk factors for it, in order to increase the awareness level of medical students' community about the effects of anxiety before and during exams on their academic achievement.

METHODOLOGY

3.1 Study desinge:

This study followed descriptive cross sectional study .

3.2 Study area:

The study was conducted in Al- Zaem Al -Azhari University.

Bahri Locality, Khartoum state, Sudan.

3.3 Study duration:

This study was conducted from December 2021- June 2022.

3.4 Study population:

All Medical students at AAU in fifth year which all about 211

3.4.1 Inclusion Criteria:

- All Medical students at AAU in fifth year

- Those who agreed to participate in the study.

3.4.2 Exclusion Criteria:

-Those who refused to participate in the study.

3.5 Sampling technique:

Simple random sampling method was used to select the sample size.

3.6 Sample Size:

The sample size was calculated by the following formula at the confidence level of 95% and degree of precision 0.05.

$$n = \frac{N}{1 + N(d^2)}$$

n=212/ [1+(0.000125)]

n= sample size.

N = Population Size = Medical college student

d = degree of precision

so, n=211.97

3.7 Data Collection tool and technique:

Closed questionnaire was designed to provide information, the collection was done by sending the questionnaire in special whatsapp groups.

3.8 Study Variables:

Sex || distribution: males and females.

Age || of the student

Personal || habits: smoking, alcohol, drugs, or coffee.

Average || reading hours.

History of mental illness or family history of mental illness. Current medications.

3.9 Data Analysis and Interpretation:

The data was reviewed, ordered, and entered manually into a computer and then analyzed using Statistical Package for the Social Sciences (SPSS) version 25.0. Data was presented as frequencies (%) and mean values (SD) as appropriate and compared using either the chi-square test (for proportions) or the student's T-test for mean values. P < we will take 0.05 as statistically significant.

9.ETHICAL ISSUES:

- Ethical approval was obtained from Ethics and Research Comities in the AAU.

- Permission from the students was taken.

- Students were informed that their data privacy will be considered and used for the purpose of the study only.

Results

A total 211 sample was collected, 48.3% were male while 51.7% were female. 53.6% of participants age from 20 to 23 while 46.4% age from 24 to 26. Table [1]

Table [1]:Distribution of participants according to there age and gender (n=211)

Variables	Frequency	Percent
Gender		
Male	102	48.3
Female	109	51.7
Age		
From 20 to 23	113	53.6
From 24 to 26	98	46.4

97.2% of participants feel anxious during OSCE while 2.8% don't feel that. Figure [1]

53% of participants don't feel anxious more than other colleagues while 47% of participants do feel that. Figure [2]

Table [2]: Distribution of participnts according to there causes to anxiety (n=211).

Variables	Frequency	Percent
Is the anxiety and fear caused by your fear of forgetting the information?		
Yes	168	79.6
No	43	20.4
Is the anxiety because of the lot to comprehend and less time to practice?		
Yes	159	75.4
No	52	24.6

79.6% of participants believe that the anxiety and fear caused by your fear of forgetting the information, while 20.4% of participants don't believe that. 75.4% of participants believe that anxiety because of the lot to comprehend and less time to practice while 24.6% don't believe that. Table [2]

Table [3]: Distrubtion of participants according to the effect of anxiety (n=211)

Variables	Frequency	Percent
Do you get an anxiety episode because of the examiner and how will he treat you?		
Yes	198	93.8
No	13	6.2
Do you feel headache before or during the exam?		
Yes	47	22.3
No	164	77.7
Do you feel anxious just thinking you don't have time?		
Yes	151	71.6
No	60	28.4
Do you sweat a lot from your hands and face during the exam?		
Yes	75	35.5
No	136	64.5
Do you get a gastrointestinal symptoms before the exam?		
Yes	122	57.8
No	89	42.2

93.8% of participants get an anxiety episode because of the examiner and how he treating participants, while 6.2% don’t get it. 22.3% of participants feel headache before or during the exam while 77.7% don’t feel. 71.6% of participants feel anxious just thinking you don't have time, while 28.4% don’t feel that. 35.5% of participants do sweat a lot from your hands and face during the exam, while 64.5% don’t. 57.8% of participants get a gastrointestinal symptoms before the exam, while 42.2% don’t get. Table [3] Table [4]

Table[4] :Distrubtion of participants according to the effect of anxiety on sleeping (n=211).

Variables	Frequency	Percent
Does anxiety affect your sleep?		
Yes	144	68.2
No	67	31.8
Have you ever felt the need to use sleeping pills to sleep?		
Yes	23	10.9
No	188	89.1

67% of participant's academic performance have affected by anxiety while 33% have not. Figure [3]

60% of participant's anxiety getting relieved with the recurrence of exams while 40% are not. Figure [4]

64% of participants satisfy with results while 36% don't . Figure [5]

Discussion

In our study males and females were nearly equal (51.7%), (48.3%) the same result was also report in Korea by Kyong-Jee Kim et al (4) and other's studies by B. Pahwa et al. and Majumder MA et al demonstrated that thier is more females than males (2) (4) but males seem to have been slightly more prevalent than females, according to Zhang N. et al. (10)

According to the previous studies, the mean age of the students was 24.4 (2) and 24.2 (5) 20.1 (21) and this nearly same as our results that the age group 20 _23 comprised the maximum number, but a higher mean age 25.9 was reported in another study. (3) and less mean also reported in previous study. (14)

Niu Zhang noted that 85% of students reported feeling anxious throughout the OSCE exam, which is lower than our study's 97.2%. (10) Khalid I. Khoshhal et al found a prevalence of exam anxiety in Saudi Arabia of 65%, which is also lower than our findings. (12) In Pakistan Brand and Schoonheim - Klein et al reported greater stress levels among dental students during OSCE in comparison to written and practical assessment methods,they said students had to prepare better for OSCEs and thier expectation to pass OSCE was also significantly higher which might be the cause of stress(18)in another study students said that there is a need to reassess the amout of the study materials allocated in their study and this could be the cause of thier anxiety. (12)

A variety of factors can contribute to assessment stress and anxiety among medical students,physiological factors are considered a leading cause of assessment anxiety (5), Mavis found that students with more clinical experience about the clinical exams, and he suggested that as students gain more clinical experience they become more knowledgeable about what they know and what they dont know, and the latter can increase anxiety relative to students with less clinical experience. (3) Niam H, et al also observed several factors that contribute to assessment anxiety among final year medical

students,extensive course load, the long duration of periods of assessment, lake of assessment preparation and lack of exercise were reported to be the most important contributing facors, (5)

In the current study 79.6% of the students believed that anxious is main reason for thier forgetting and this affects their performance, in Taif Medical Collage they conducted the anxiety has a negative effect on overall academic performance of Medical students, and they reported that stress was more apparent in the third year. (17), anxiety was not predictive of performance outcome in the OSCE, written examination or percilincal preparation test. (18)

in a previous study 42% reported that this stress did not affect thier performance while decrease in performance was reported by 33% (21) another study reported the same result (1) but there's another study reported that anxiety and self-efficacy were negatively associated : students who were highly anxious about the OSCE were less confident about thier ability to perform in the stimulation. (3)

Two third of the participants because of the alot comprehend and less time and this also report by another studies when asked students about thier comments they said that they need more time and Majumder MD et al reported the same result. (2)

Regarding the examiners and how they interacted with the students, we noticed that they were cooperative, that there was a good staff available, and that there was a good mixture of local and foreign examiners (2). However, because of the examiner's, 93.8% who study become anxious.

Many students worry that they don't have enough time, and respondents also thought that the time allotted for projects was insufficient, which added to their stress. However, there is disagreement among students and examiners in the same study regarding the timing at OSCE stations. (2)

A prior survey revealed that the majority of students were satisfied with their OSCE performance as indicated in 64 percent of the participants said they were satisfied with their results (2), many students also had little knowledge of assessment taking and anxiety reduction techniques(5)

Conclusion

In our study, we assessed the anxiety related to OSCE Exam in Medical Students of AAU We found that

- There was a very high prevalence of anxiety in OSCE exams among students (97%)

- Equal percent between males and females

- Anxiety decreased students performance because of their stress.

- There was no collaboration between the examiner and the student which made students more anxious.

- The time in not enough for every station.

Recommdation :

Due to the significant frequency of mental distress among students,

1. we advise policy-makers to pay attention to the issue and take appropriate corrective measures. representatives from the college, non-governmental organizations, parents, students, and other relevant individuals. These recognized causes of mental distress against students must be addressed in programs designed to prevent it.

2-Specialized intervention be offered to those with high anxiety levels.

3- Encourage students to adpot healthy & effecive mean of relaxation like yoga, breathing exercises and non formal counseling .

Declarations

Funding

This study received no funding.

Availability of data and materials

The datasets used and/or analyzed during the current study are available

from the corresponding author on reasonable request.

Ethics approval and consent to participate

Ethical approval of the study was obtained from the IRB committee in the ethical committee of the University of alzaiem alazhari .The study was carried out following the relevant ethical guidelines and regulations. The

participants were asked to give consent that they agree to participate in the

study by filling the questionnaire for research purposes,

and all the participants provided informed consent.

Consent for publication

No personal data was collected from the participants.

Competing interests

The authors declare that they have no competing interests.

Authors contributions

All authors contributed **equally**

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Figures

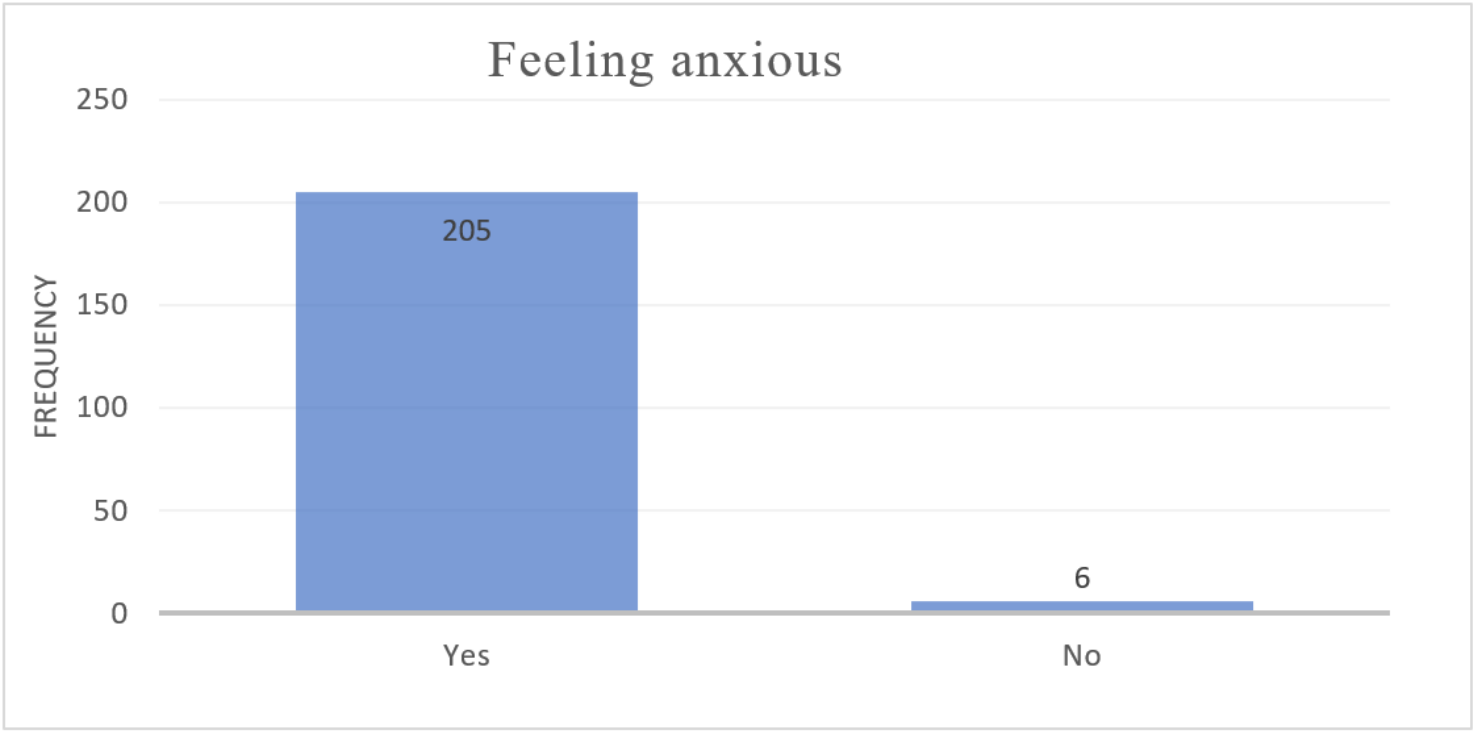


Figure 1

Distribution of participnts according to there feeling of anxiety (n=211)

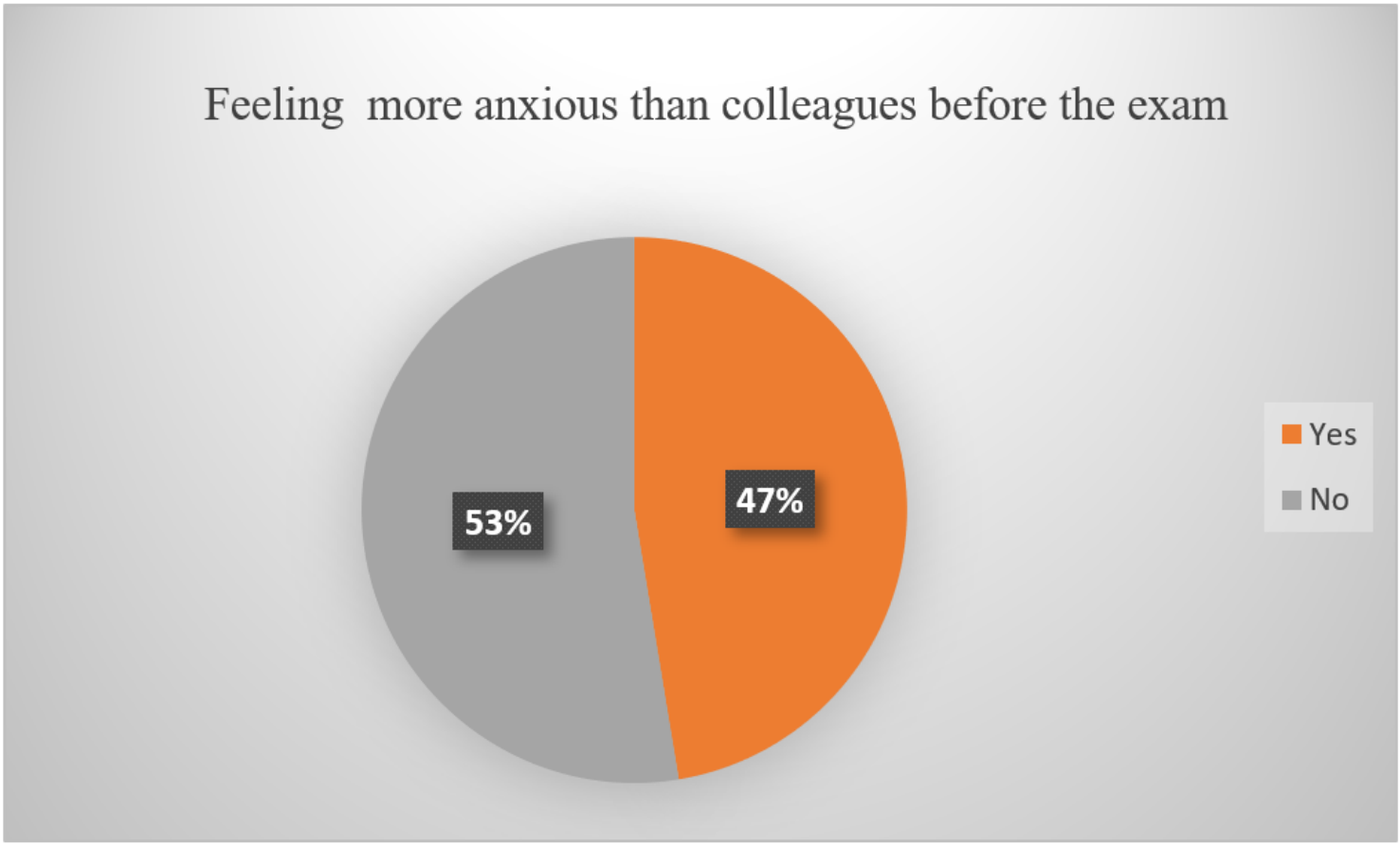


Figure 2

Distribution of participnts according to there feeling more anxious than other colleagues before the exam (n=211)

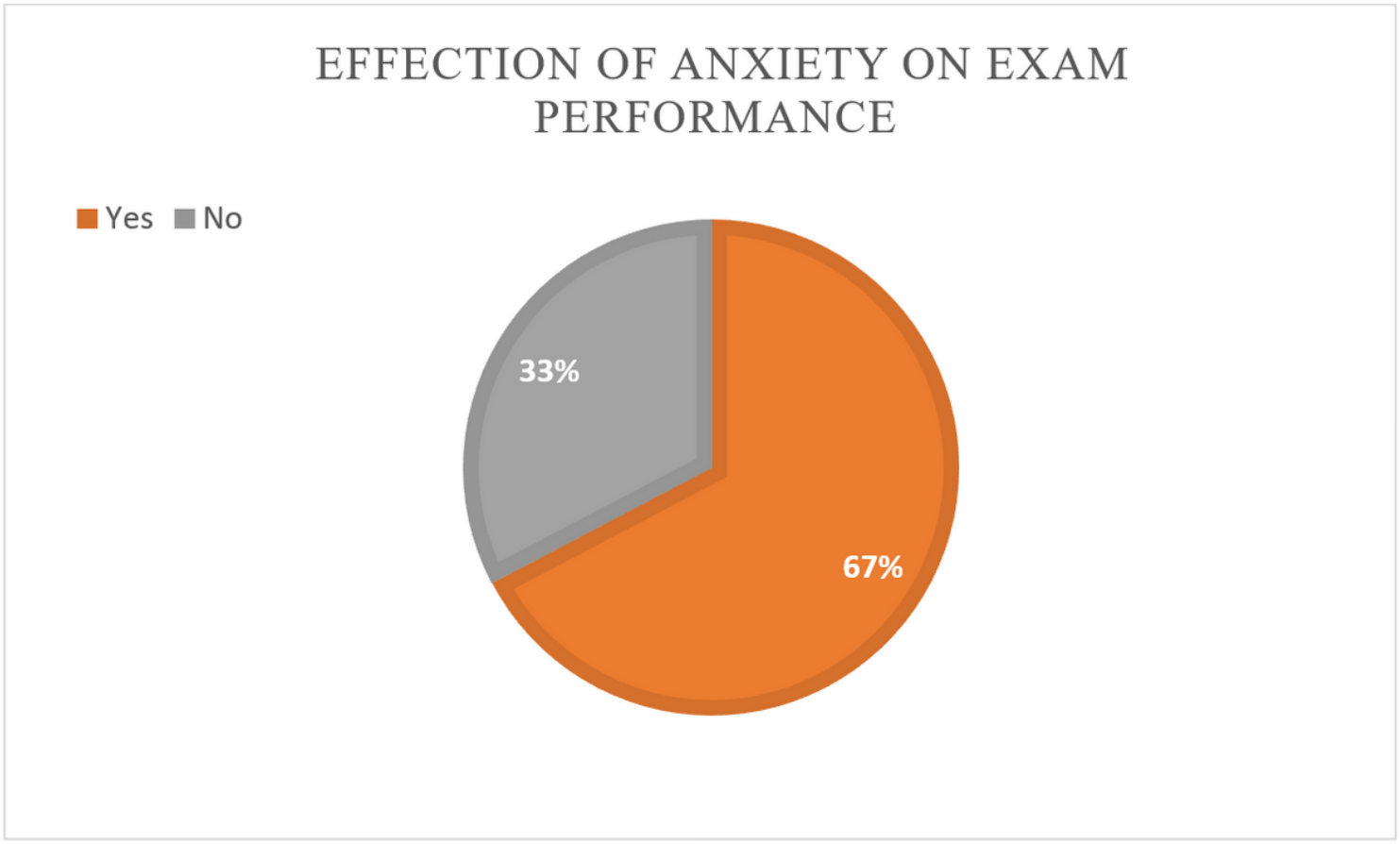


Figure 3

Distrubtion of participants according to effect of anxiety on exam performance (n=211).

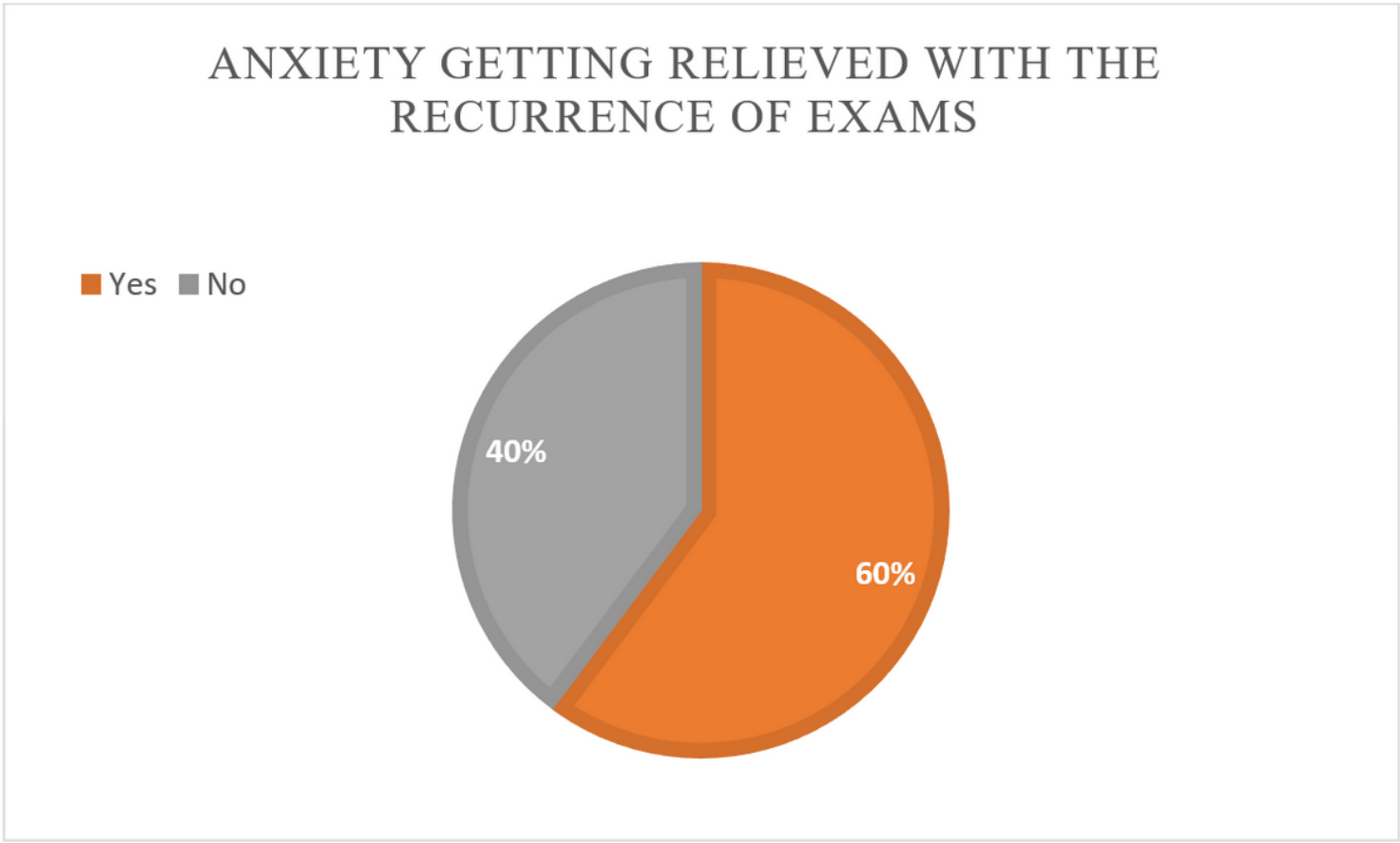


Figure 4

Anxiety getting relieved with the recurrence of exams (n=211).

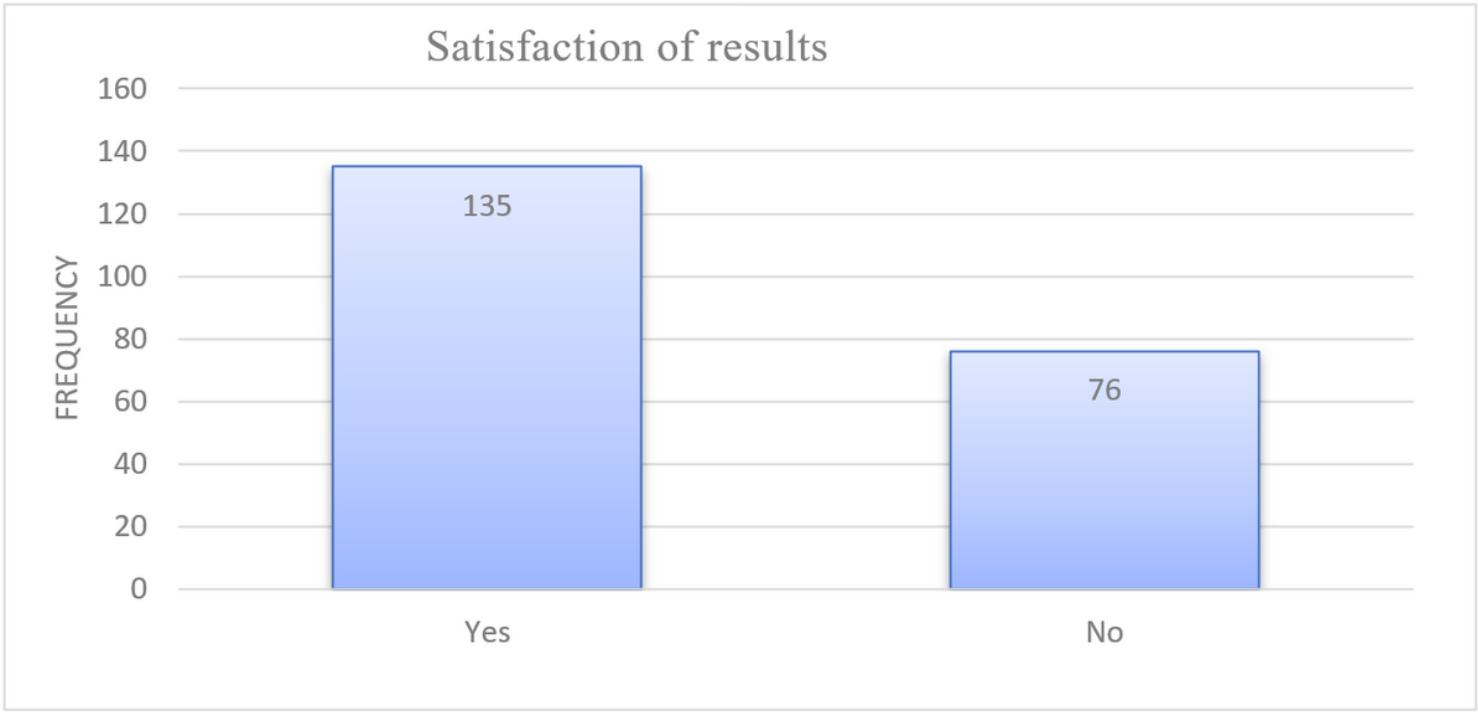


Figure 5

Distrubtion of participants according to there satisfaction of the results (n=211).