

Pattern of Anxiety and Depression among Secondary School Students in Riyadh, KSA

Dr. Faris Essa Ahmed^{1*}, Dr. Mohammed Alrowaily²

ABSTRACT

Objectives: to assess the Prevalence of anxiety and depression among secondary school students and to compare male and female group **Methods:** This is an observational cross section study using The sampling technique followed stratified convenient sampling and data was collected using self-administered questionnaires (Arabic version of the symptom revised SCL 90- R). Data was collected from 331 secondary school students between 15 and 18 years old from both genders after raking an informed consent **Results:** Results show 25.7% of the students had anxiety, On comparing boys and girls, 23 boys (10.1%) had anxiety, while 62 (59.6%) of the girls had anxiety. In depression 28.4% is the Prevalence of depression in both genders, on comparing boys and girls, 34 male students (14.9%), while 60 female students (57.7%) had depressive symptoms with strong significance when comparing boys to girls **Conclusion:** This study analyzed the importance of mental health assessment and follow-up in secondary school students, especially girls. However, further assessment for other co – factors such as socioeconomic differences should be considered.

Keywords: Pattern, Anxiety, Depression, School, Students, Riyadh, KSA

Anxiety is one of the most common psychological disturbances that people face in life. When mild to moderate, this pattern of psychological disturbances is considered normal and helpful; however, in severe cases, it can be considered a mental health disorder that requires medical intervention. People from different age groups are susceptible to this anxiety. According to the American Psychological Association, anxiety is an emotion characterized by feelings of tension and worried thoughts.”⁽¹⁻³⁾

Anxiety manifestations vary from one person to the other. The clinical manifestations include physiological changes, which result from enhancement of the sympathetic pathway like hyperventilation, increased heart rate, increased blood pressure, sweating, and abdominal distress. Clinical signs may include psychological changes like having feelings of powerlessness, anger, anxiousness, irritability, or lack of sleep. Anxiety may also manifest in the form of panic attacks in severe cases. The Etiology of anxiety differs from person to person and

¹ King Saud Bin Abdulaziz university for health sciences, Riyadh, Saudi Arabia

² Family and community medicine in King Saud Bin Abdulaziz university for health sciences, Riyadh, Saudi Arabia

*Corresponding Author

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from one form to another. For example, some people experience anxiety due to social issues like occupational pressure, unemployment, scholastic pressure, or due to physiological problems like heart disease, diabetes, substance withdrawal, and thyroid gland dysfunction. Some drugs like isotretinoin could lead to psychological disturbances similar to anxiety. Other factors may precipitate anxiety, such as ineffective coping strategies for life stressors. People who have effective coping methods are less prone to anxiety disorders while those who have ineffective coping strategies are more susceptible to them. (4-5)

In one study conducted in the city schools of Kolkata, India, the prevalence of anxiety was 17.9% among girls and 20.1% among boys. Adolescents with working mothers had a noticeable increase in the level of anxiety. (6) In addition, 32.1% of the adolescents claim that they did not receive quality time from their fathers and 21.3% did not receive quality time from their mothers. (6) One similar study conducted on male students in Abha, Saudi Arabia showed that 48.9 % of the students had an anxiety problem. (7)

In a study conducted in New Brunswick, Canada, high anxiety levels among adolescents was associated with academic challenges, as well as lack of parents' support. (8)

Of the 19.5 million Saudi Arabian citizens, approximately 1.5 million (7.6%) are in secondary school. This age group comprises a very large percentage of the population. (9) In the future, the number of secondary school students will only increase.

Our research examines the pattern of anxiety among the 1.5 million Saudi Arabian secondary school students who are currently under very strong educational and social pressure. Several factors worsen the situation. First, the students' curriculum is getting harder. Second, the last 2 years of secondary school education greatly influence the students' higher educational course. Third, two other examinations affect students' future; these are conducted by the National Center for Assessment in Higher Education. (10) The first includes some of the secondary subjects like biology, chemistry, physics, and mathematics. The second is mainly about mathematical and Arabic skills. In the present study, we quantify the prevalence of anxiety among secondary school students and address the variety of underlying causes. By raising this issue, we hope the medical community will try to prevent this problem and improve strategies for managing anxiety.

OBJECTIVES

- To estimate the raw anxiety score among secondary students
- To identify the patterns of psychological disorders among secondary students
- To compare the anxiety score between females and males
- To compare the depression score between females and males
- To identify significant predictors of anxiety score among secondary students
- To identify significant predictors of depression score among secondary students

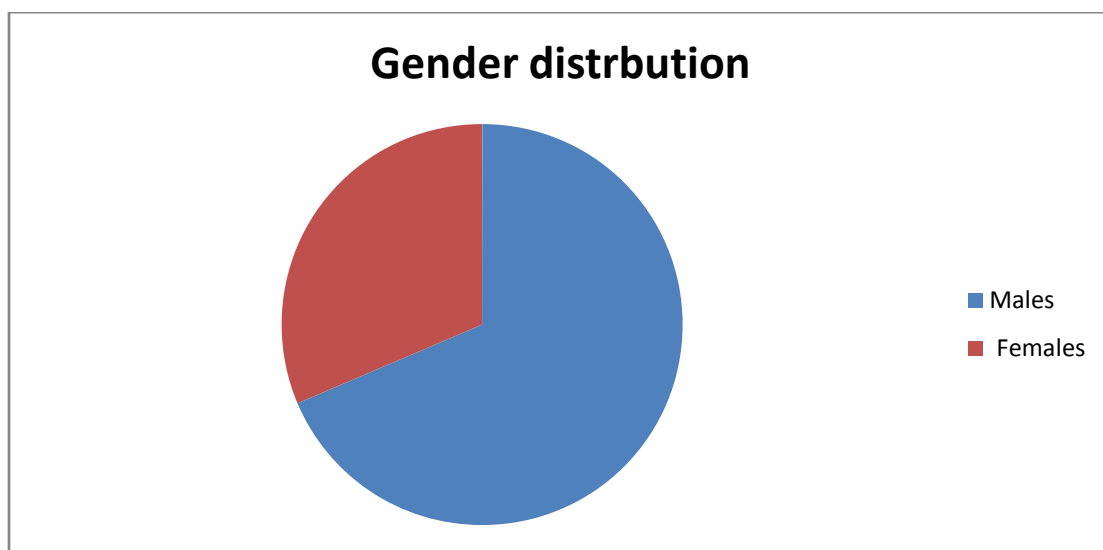
METHODOLOGY

This cross-sectional study was conducted in Riyadh city, the capital of the Kingdom of Saudi Arabia, during the academic year in March 2013. The population of Riyadh is 5.7 million. In Saudi Arabia, Formal education of children begins at the age of 7 years and comprises three levels: primary, intermediate, and secondary. The research was approved by the institutional review board in King Abdullah International Research Center. In our study, we choose secondary school students as the target population. There are more than 1.5 million students enrolled in secondary schools . Boys and girls study separately in school. Consent forms describing the aim of the study were sent out by school authorities to the parents of each child. It requested participation of the child by responding to a questionnaire. Students had the option not to participate in this study. The data was collected directly from the participants after obtaining the informed consent. The questionnaire was an Arabic version of the symptom-revised checklist for 90 symptoms (SCL 90-R). One school from each of the five educational zones in Riyadh city was involved in the study. Students were selected using stratified convenient technique from two different governmental schools from two different areas in Riyadh city. Data was managed with SPSS.

The Arabic version of the symptom-revised checklist comprises 90 items in the form of a Likert scale. These 90 symptoms are categorized in multiple groups, and each group represents a specific psychological item. These items include anxiety and depression, which are the main concerns in our study. This scale was psychometrically validated for the Arabic population by Al-Behairy.⁽¹⁰⁾

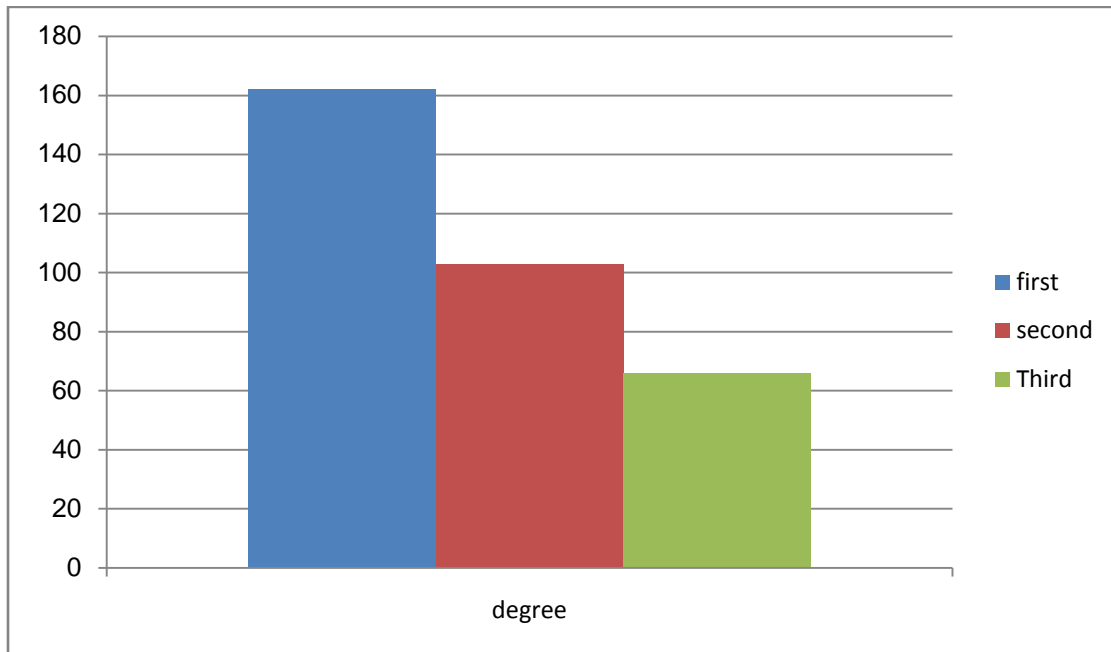
RESULTS

There were 331 participants: 227 (68.6%) boys and 104 (31.4%) girls. The average age of the participants was 16.72 years.

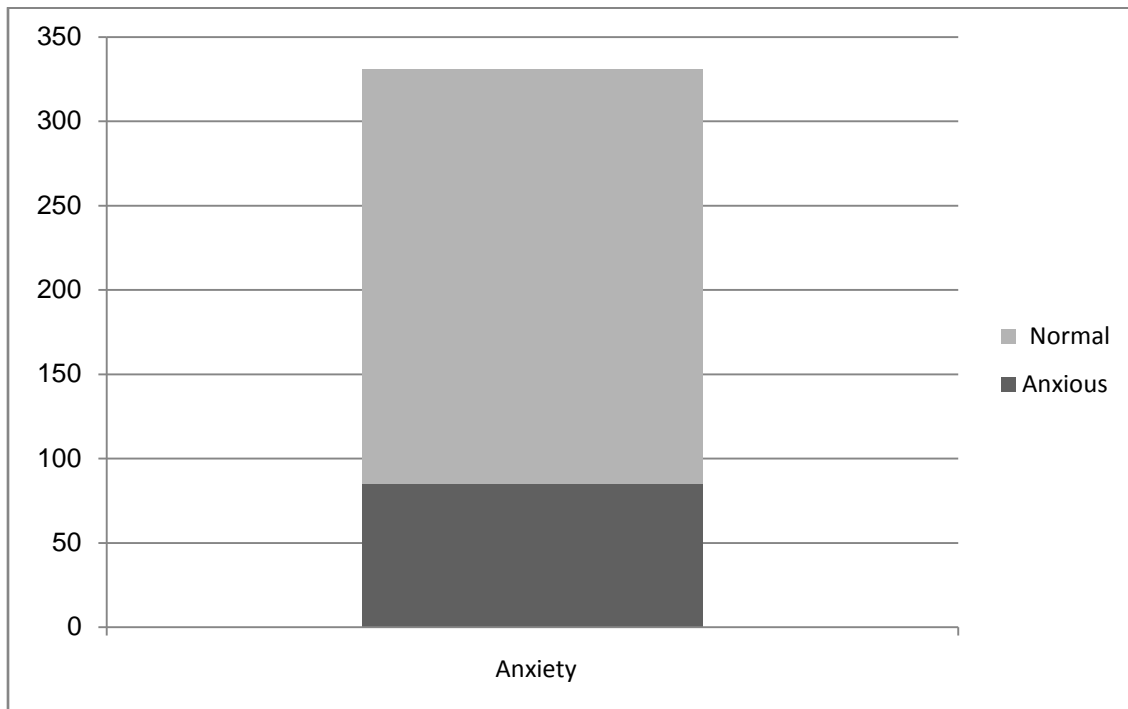


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The results show that 162 (49%) of the participants were from the 1st degree in secondary school, while 103 (31%), were from the 2nd degree, and 66 (20%) were from the 3rd degree.



The results show that the total number of subjects with an anxiety disorder in both genders is 85 out of 331 (25.7%).

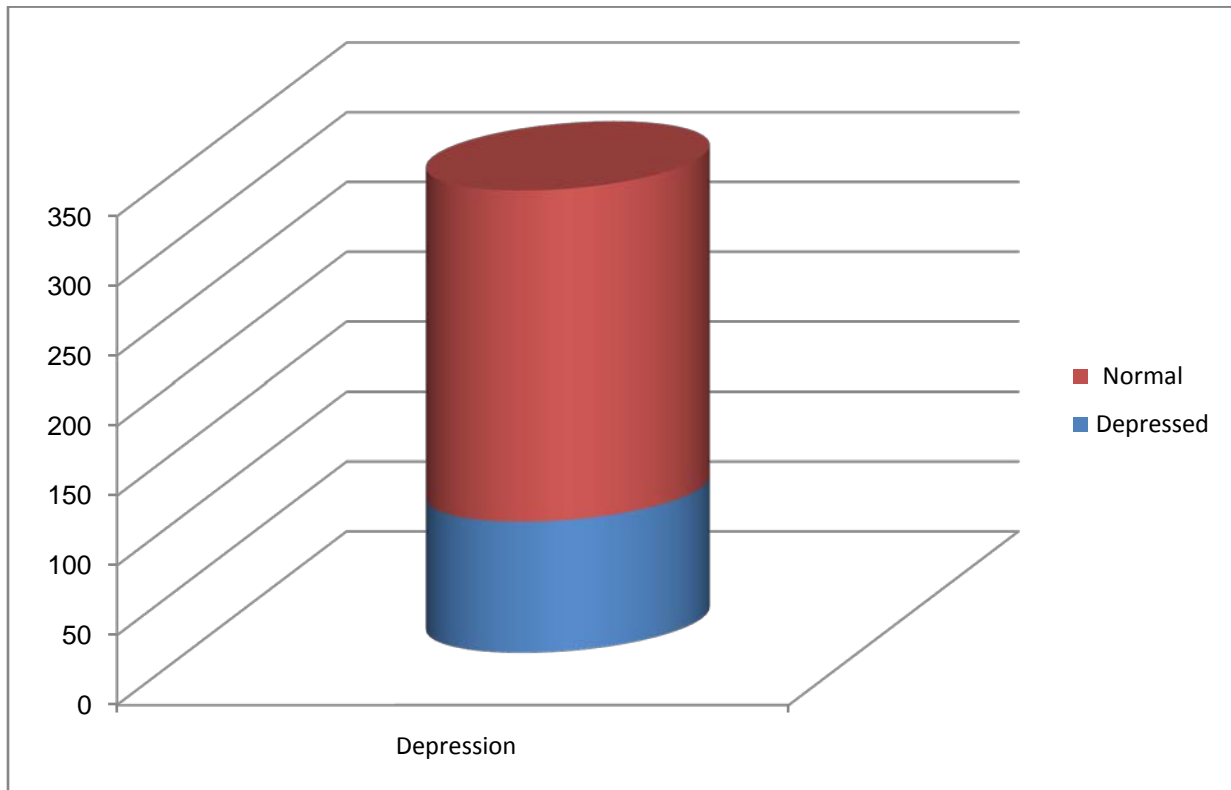


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On comparing boys and girls, 23 boys (10.1%) had anxiety, while 62 (59.6%) of the girls had anxiety ($p < 0.0001$), showing clear significance.

Anxiety	Frequencies	Percentage
Boys	23	10.1%
Girls	62	59.6%
Both	85	25.7%

The results show that the total number of subjects with depression disorder in both genders is 94 out of 331 (28.4%).



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The results show that 34 male students (14.9%), while 60 female students (58%) had depressive symptoms ($p < 0.0001$), showing clear significance.

Depression	Frequencies	Percentage
Boys	34	14.9
Girls	60	57.7
Both	94	28.4

In comparison of prevalence of depression between different degrees in secondary school for both males and females the results show 30.2% (49 in number) of students in first degree have depression while in the second degree 30.1% of students (31 in number) have depression. In the third degree students 45.5% have depression (30 in number) with a P value < 0.065 showing no significant difference

Depression	Frequencies	Percentage
First degree	49	30.2
Second degree	31	30.1
Third degree	30	45.5

DISCUSSION

The results show a significant difference in the prevalence of anxiety as well as depression between boys and girls. Of the 104 girls enrolled in the study, 62 suffered from an anxiety disorder. In contrast, of the 227 boys enrolled, only 23 had anxiety disorders.

Female students have a higher frequency of depressive symptoms (60 out of the 104 enrolled in the study), while only 34 out of 227 male students showed depressive symptoms.

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In a study conducted on 545 female students in Abha, KSA, using the same questionnaire as in this study, 14.8% of the students had anxiety symptoms and 13.9% had depressive symptoms, which is less than the prevalence seen in our study.

Many issues might explain the difference. One of them is the fact that students in the Abha study were from intermediate school. Second, the importance of higher education might be less in Abha compared with Riyadh. Third, multiple examinations were introduced in 2007, while that study was conducted in 2006.

CONCLUSION

This study analyzed the importance of mental health assessment and follow-up in secondary school students, especially girls. However, there are some limitations to our study, such as the sample size of the female students, also the number of schools included. In addition, it may be helpful to evaluate the differences between different socioeconomic classes as well as comparing the difference between governmental versus private schools.

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REFERENCES

- 1: [Parveen Kumar](#), [Michael L. Clark](#). clinical medicine. 7th edition. International edition.elsevier.2009
- 2: Alan E. Kazdin. Encyclopedia of Psychology. American psychological association. March 2003
- 3: Mind and body, anxiety disorder. American psychological association. 2012. <http://www.apa.org/health-reform/anxiety-disorders.html>
- 4: Danny wedding , Margaret L. Stuber. Behavioral medicine. 5th edition. International. Hogrefe. May 2010
- 5: Robert E. Hales, Stuart C. Yudofsky. The American Psychiatric Publishing Textbook of Psychiatry.5th edition. USA. American Psychiatric Association.April 2008
- 6: Sibnath Deb, Pooja Chatterjee, Kerryann Walsh. Anxiety among high school students in India: Comparisons across gender, school type, social strata and perceptions of quality time with parents. 2010. Vol 10. 18 – 31
- 7: Al-Gelban KS. Depression, anxiety and stress among Saudi adolescent school boys. J R Soc Promot Health. 2007 Jan;127(1):33-7.
- 8: Saudi Central department of statistics and information\ education and culture 2010. <http://www.cdsi.gov.sa/>
- 9: national center for assessment in higher education \ <http://www.qiyas.sa/Pages/default.aspx>
- 10: Al-Behairy AA. Symptom Checklist-90 (SCL-90R), Arabic form. Cairo, Egypt: Al-Nahda Al-Messria Library; 1984.