Original Article

Prevalence and Comorbidity of Depression, Anxiety and Obsessive Compulsive Disorders among Saudi Secondary School Girls, Taif Area, KSA

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Abstract

Background: Previous Saudi studies have shown the psychiatric comorbidity among adolescent girls. This article was done to assess the prevalence and comorbidity of psychiatric disorders among secondary school girls in Taif area.

Methods: A cross-sectional multistage cluster-sampling methodology was carried out on 1024 secondary school female students. Psychometric evaluation of students was carried out using the Beck depression inventory, Castello and Comery Anxiety scale and Obsessive – compulsive disorder scale.

Results: Out of the 1024 participants, 42.9%, 54.9%, and 23.1% had significant depression, anxiety and obsessive compulsive symptoms, respectively. In addition, 64.7% of them had symptoms of the three studied disorders. A highly significant positive correlation was found between depression score and both anxiety and OC symptoms scores and between anxiety score and OC symptoms score.

Conclusions: There is a need for a national intervention program for promotion of adolescent mental health. The program should include screening of students using the psychometric scales.

Key words: Comorbidity, girls, KSA, prevalence, psychiatric

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Introduction

Many mental disorders have their beginnings in adolescence which often go undiagnosed and untreated for years.[1] These disorders interfere with the way adolescents think, feel, and act, and when untreated, they can lead to school failure, family conflicts, drug abuse, violence, and even suicide.[2]

Depression is a common disorder among children (lower than 18 years).[3] Many studies have shown that adolescent girls have a higher prevalence of depression than males.[4] Studies on high school students have shown the same gender difference in the incidence of depression.[5] Anxiety is another common psychological disorder affecting adolescents.[6] Research has shown that if left untreated, children with anxiety disorders are at a higher risk to perform poorly in school, miss out on important social experiences, and engage in substance abuse.[7] Obsessive compulsive disorder (OCD) is one of the most important psychiatric disorders that could be disabling and interferes with patient's daily activities, occupational functioning, social activities, and relationship with friends and family members.[8]

In the Eastern Mediterranean Region, the estimated prevalence of child and adolescent mental disorders was 10%–36% which is either similar to or significantly higher than the global estimates.[9] The rapid change in lifestyle in many countries has a clear impact in terms of stress and mental health-related conditions.[10] These changes occurred in Saudi population, and they had considerable negative impacts on societal health.[11] A study done in Saudi Arabia on secondary school girls in Abha City showed a prevalence of symptoms of anxiety and depression to be 66.2% and 41.5%, respectively.[12] Another study done in the same region showed a prevalence of anxiety and depression and obsessive-compulsive behavior to be 14.3%, 13.9% and 12.3%, respectively.[13] Two recent studies done in Saudi Arabia showed a higher prevalence of psychiatric disorders in girls than boys.[14,15] It was proved that when an adolescent meets the diagnostic criteria for one psychiatric disorder, it is likely that he or she will meet the criteria for at least another disorder.[16,17] This finding was proved in a previous Saudi study done on adolescent girls who showed a comorbidity of 50.1%.[12] As the psychological disorders among secondary school girls have shown a high prevalence in some regions of the Kingdom, the aim of this work was to estimate the prevalence and comorbidity of depression, anxiety and obsessive compulsive disorders among secondary school girls in Taif area, KSA.

Materials and Methods

Study design

A cross-sectional study was carried out on a sample of secondary school girls in Taif City during the period from October 2013 to May 2014.

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Participants

The subjects of the study were female students (15–17 years) enrolled in secondary schools in Taif City in the 2013–2014 academic year.

Sampling technique

A multistage cluster sampling methodology was used. From the twelve female secondary schools in Taif City, six were randomly chosen following simple random sampling. From each grade (of the three grades of secondary school), two classes were randomly chosen. The total number of secondary school students registered in the six schools in the year of the study was 1096 students. After exclusion of the non-respondents, the response rate was 93.4%, and the number of secondary school girls who participated in the study was 1024 students.

Instruments

The students were subjected to three psychometric scales used for evaluation of the participants: (a) Beck depression inventory: which is a 21-item self-report instrument used to assess the existence and severity of symptoms of depression. Each item on the scale was scored from 0–3 according to the symptom severity and the total score ranged from 0 to 63. The student was diagnosed as normal if scoring less than 26, while the degrees of depression were determined as follows: mild depression with a score ranging 26–38, moderate 39–55 and severe 56–63. Diagnosis of significant depressive symptoms was at a score of (26/63).[18] (b) Castello & Comery Anxiety scale: in its Arabic version which is a 9-item self-report scale used to assess symptoms of anxiety. Students rated symptoms on a nine-step Likert scale and each item was scored from 1 to 9, and the total score ranged from 1 to 81. Diagnosis of significant anxiety symptoms was at a score of (45/81).[19] (c) Obsessive – compulsive disorder scale: which is a 40-item self-report scale used to assess different symptoms of Obsessive-compulsive individuals. Students rated symptoms on a five-step Likert scale and each item was scored from 0 to 4, and the total score ranged from 0 to 160. Diagnosis of significant Obsessive Compulsive symptoms was at a score of (100/160).[20]

Ethical points

Official approvals were obtained from the scientific research committee of Taif University and the General Director of secondary education of Taif Governorate. During the interview, the participants were simply informed about the aim of the study and were assured of the full confidentiality of their data. An oral consent was taken from every student before participating in the study.

Data Analysis

Results were statistically analyzed with the Statistical Package of Social Science (SPSS) version 16. Qualitative data were presented in the form of numbers and percentages. Pearson correlation test was used for correlation analysis. A P-value <0.05 was considered statistically significant.

Results

This study was carried out on 1024 secondary school female students with an age ranging 15–17 years in Taif Area, Kingdom of Saudi Arabia (KSA). Table 1 shows that 42.9%, 54.9% and 23.1% of participants have significant depression, anxiety and obsessive compulsive symptoms, respectively, and 64.7% of participants have symptoms of the three studied disorders. Figure 1 demonstrates that 63.8% and 36.2% of students with depressive symptoms had mild and moderate depression, respectively, while none of them had severe depressive symptoms.

Table 2 shows that participants with depression symptoms show coexisting anxiety and OC symptoms at rates of 81.1% and 38.7%, respectively. Depression and OC symptoms coexist with anxiety symptoms at rates of 63.3% and 37.4%, respectively. Finally, the rates of occurrence of associated depression and anxiety symptoms with OC symptoms are 58.1% and 78.3%, respectively.

Table 3 and Figure 2 show that there were highly significant positive correlations between depression score and both anxiety and OC symptoms scores and between anxiety score and OC symptoms score (P-value < 0.001).

Discussion

In the present study, the prevalence of studied psychiatric disorders is much higher than that reported in other national and regional studies.[4,21–24] However, this high prevalence is consistent

Table 1. Prevalence of depression, anxiety and obsessive compulsive symptoms among the studied group using psychiatric scales.

The studied disorders	The studied group N = 1024	
	No	%
Depression		
Positive	439	42.9
Negative	585	57.1
Anxiety		
Positive	562	54.9
Negative	462	45.1
Obsessive compulsive disorders		
Positive	237	23.1
Negative	787	76.9
Prevalence of any symptoms	663	64.7
Free of symptoms	361	35.3

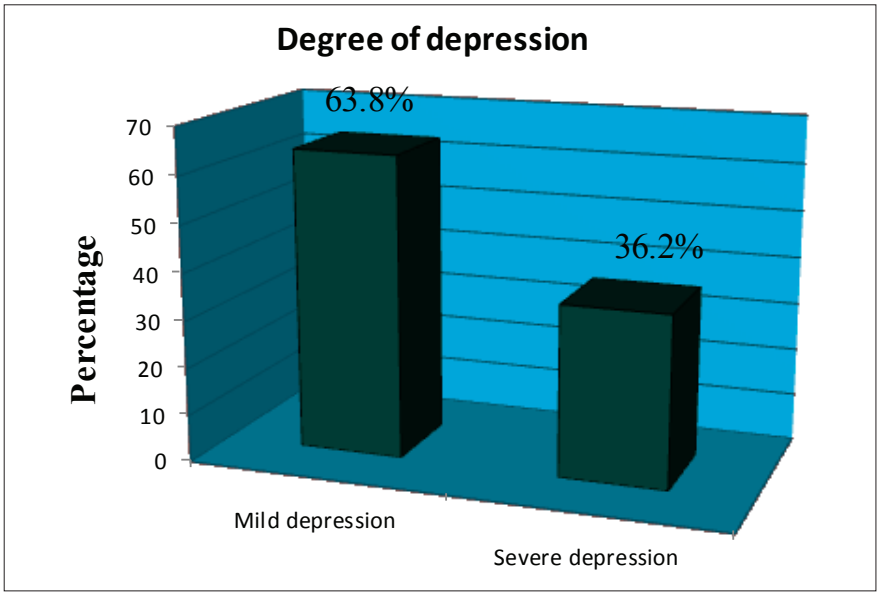

Figure 1. Degree of depression among the studied group.

Table 2. Coexistent symptoms of different studied disorders as diagnosed by psychiatric scales.

Parameter	No	%
Depression symptoms with	(N = 439)	
Anxiety symptoms	356	81.1
Obsessive compulsive symptoms	170	38.7
Anxiety symptoms with	(N = 565)	
Depression symptoms	356	63.3
Obsessive compulsive symptoms	210	37.4
Obsessive compulsive symptoms with	(N = 237)	
Anxiety symptoms	170	71.7
Depression symptoms	210	88.6

Table 3. Correlation between severities of depression, anxiety, and obsessive compulsive symptoms among secondary school girls.

	Depression		Anxiety		OC symptoms	
	r	*P*-value	r	*P*-value	r	*P*-value
Depression	---		+ 0.59	<0.001	+ 0.63	<0.001
Anxiety	+ 0.59	<0.001	---		+ 0.59	<0.001
OC symptoms	+ 0.63	<0.001	+ 0.59	<0.001	---	
r = Pearson correlation						

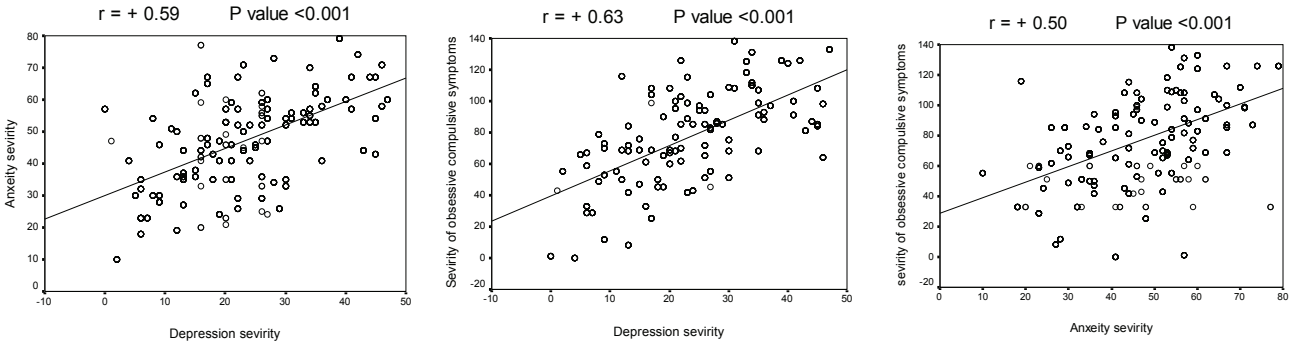

Figure 2. Correlation matrix between severities of depression, anxiety, and obsessive compulsive symptoms among secondary school girls.

with other studies which showed a high prevalence of these disorders among adolescent girls.[4,15] An explanation of this high rate may be the use of a self-reported questionnaire as it may lead to a higher prevalence rate than other methods of assessment.[15,25] That is because it depends on symptoms rather than psychiatric diagnosis.[12,26]

The prevalence of depression in this study (Table 1) is in consistence with results revealed from previous Saudi studies and studies from other countries that have shown a high prevalence among adolescents generally, and among girls especially.[12,27–30] Previous studies explained this in the view of the progressive rise in depressive symptoms from menarche,[31] the influence of female gonadal hormones, and the psychological changes associated with puberty.[14] Other studies attribute this high prevalence to the parents, as they restrict girls' behaviors more than boys', and have lower expectations for girls in terms of competencies and achievements compared to boys.[32] This theory is going well with a conservative community as Saudi Arabia.

On the other hand, this observed prevalence of depression is much higher than that revealed from other national and international studies done on the same age group.[14,33] The marked diversity in these studies results could be attributed to the difference in methodology used, case definition, method of collecting information, sampling procedures, age or the different geographical locations.[26,34]

The high prevalence of anxiety observed in this study (Table 1) is in agreement with previous studies done on Saudi adolescents,[12,21,27,35] and it is in line with other studies which have shown that anxiety disorders are the most prevalent psychiatric diagnosis among adolescents.[22,35] The high prevalence of symptoms of depression and anxiety among the studied girls could be due to the stresses faced by Saudi females as a result of the cultural and social changes in the Saudi society.[36] Another study explained this in light of the complexity of the Saudi job market for women, which makes choosing a career more difficult. In addition to the problems faced by secondary school students,[12,37] other causes may be fear of making mistakes, feelings of inadequacy, or fear of unemployment after graduation, which are factors leading to distress in students in this age group.[38] The academic stressors faced by secondary school students may be also blamed considering the volume of materials to be learned and academic performance.[39]

According to the results obtained from this study (Table 1), lower rates of OCD prevalence were obtained from studies done in KSA and other countries. This could be attributed to the use of different types of scales.[8,13,22] According to the degree of depression in students with depressive symptoms, only mild to moderate severity was found (Figure 1), a result that was found in another Saudi study.[12]

The present work showed a high co-occurrence of depression, anxiety and OCD symptoms (Table 2), which is a finding observed in studies carried out on Saudi adolescents and adolescents from different cultures.[12,40] This high co-occurrence could be attributed to many factors such as the overlapping diagnostic criteria, genetics, neurophysiology, neurochemistry, negative affect, temperament, perceived control, or to the interpersonal mechanisms.[41,42] In the same time, previous studies have shown that the presence of anxiety symptoms increases the chance of developing depressive symptoms.[43] The significant positive correlations between depression score and both anxiety and OC symptoms scores and between anxiety score and OC symptoms score observed in this study (Table 3 and Figure 2) are in agreement with other studies.[44,45]

Limitations

The educational authorities in KSA prevent female researchers from conducting studies on male students. That is why the researches did not have the opportunity to assess the gender difference in prevalence rates. In addition, the use of a self-reported questionnaire necessitates psychiatric evaluation through structured clinical interview for final diagnosis.

Declaration of interest

The authors report no conflicts of interest

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