Obsessive-Compulsive Symptom Prevalence among University Students and Associated Demographic Variables

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انتشار أعراض اضطراب الوسواس القهري بين طلاب الجامعة وعلاقته ببعض المتغيرات الديموغرافية

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Abstract

Background: Most Obsessive-Compulsive Disorder (OCD) symptoms appear in adolescence and early adulthood although there is significant variation in age of onset. There is a need to raise awareness as to how these symptoms might manifest in university students because they can lead to different psychological problems, including depression, anxiety, interpersonal relationship difficulties, suicide, and substance use. **Aims:** The present study investigated the prevalence of OCD symptoms among university students and their relationship with demographic variables, including gender, age, achievement, and course of study. **Method:** A total of 584 students (278 men, 306 women) completed the Yale-Broun Obsessive-Compulsive Scale (Y-BOCS) and a demographic questionnaire. **Results:** There was a high prevalence of OCD symptoms among university students (58.53%) with a higher prevalence among women and among scientific college students. Results also suggest a negative correlation between age, achievement, and OCD symptoms. **Conclusion:** It appears that university students are more vulnerable to OCD-related symptoms, which may also be comorbid with other disorders and magnify their problems. Suitable interventions and psychoeducation should be implemented during the study years.

Keywords: OCD symptoms, prevalence, university students

Declaration of interest: None

Introduction

Obsessive-Compulsive Disorder (OCD) is considered a separate disorder in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).[1] It was previously classified as an anxiety disorder in DSM-IV. Symptoms of OCD fall into two categories: obsessions and compulsions.[1] Obsessions can be defined as intrusive, unwanted, recurrent, improper, contained thoughts, impulses, and mental images causing considerable distress and suffering to people. These can be described as excessive and senseless by the external world. On the contrary, compulsions can be defined as feeling compelled to perform a particular act or repeated acts that are either behavioural or mental. OCD rituals usually consume a lot of time and can cause embarrassment and shame, especially in social, occupational, and other situations. Adults with OCD symptoms are affected by impairments related to pursuing steady employment, marital difficulties, or general functioning.[2]

People who are struggling with OCD may have the following signs: think about harming themselves or someone else; continuously fear being contaminated by germs or contaminating others, fear they might lose

control, having unwanted sexual thoughts, having a religious obsession, and having an obsession related to perfectionism.[2,3]

The lifetime prevalence of OCD is 2.3%, and this notion may be an underrepresentation because often, patients with moderate to severe symptoms do not seek help.[3] The mean age of OCD onset is 19.5 years, with early onset among boys i.e., before ten years of age. Life risk of developing OCD is higher in girls, who may develop the disorder in adolescence.[3] OCD is a choric neuropsychiatric disorder that can lead to disability and low quality of life, which is likely to persist if not treated properly.[4] The pathogenesis of OCD is complex and interplays between neurobiology, genetics, and environmental variables. The serotonin system may be the main factor, along with the involvement of glutamate, dopamine, and other neurotransmitters.

The most comorbid disorders associated with OCD include anxiety disorder (panic disorder, social anxiety disorder, generalized anxiety disorder, specific phobia) in 76% of cases and depressive or bipolar disorder in 63% of

cases.[4] The onset of OCD is usually later than for most comorbid anxiety disorders (except separation anxiety disorder) and posttraumatic stress disorder (PTSD); however, it often proceeds to depressive disorders. A comorbid obsessive-compulsive personality disorder is common in individuals with OCD (e.g., 23% to 32%). Up to 30% of individuals with OCD also have a lifetime tic disorder, and tic disorder is most common in boys with the onset of OCD in childhood. These individuals tend to differ from those without a history of tic disorders in the themes of their OCD symptoms, comorbidity, course, and pattern of familial transmission.

People with OCD have a higher risk of suicide, as 63% of people with OCD experienced suicidal thoughts, and 26% attempted suicide. The risk of suicidal behaviour increases with the comorbidity of depression, PTSD, substance use, and impulse control disorders.[5]

OCD related disorders include:[1]

- Body dysmorphic disorder, which is characterized by a preoccupation with one or more perceived defects or flaws in physical appearance. These individuals are also distinguished by repetitive behaviours (mirror checking, excessive grooming, skin picking, or reassurance seeking) or mental acts (comparing one's appearance with that of other people) in response to the appearance concerns.
- Hoarding disorder symptoms, which result in the accumulation of a large number of possessions that occupy the living places to the extent that their intended use is impossible. The excessive acquisition form of hoarding disorder consists of excessive collecting, buying, or stealing unneeded items.
- Trichotillomania (hair-pulling disorder), which is characterized by recurrent pulling out of one's hair resulting in hair loss and repeated attempts to decrease or stop hair pulling.
- Excoriation (skin-picking) disorder, which is characterized by recurrent picking of one's skin resulting in skin lesions and repeated attempts to decrease or stop skin picking.

Most OCD occurs in adolescence and early adulthood; although, there is significant variation in the onset of OCD. These behaviours are extensively noticed among university students as university life is full of challenges, responsibilities, stress, deadlines, competitions, social pressure, and new environmental requirements. The above challenges, among others, can lead to different psychological disorders that include depression, anxiety, interpersonal relationship difficulties, suicide, and substance use.[6] Few previous studies have addressed the subject of OCD symptoms among university students, particularly in Jordan.[7,8] To date, few studies have focused on the prevalence of OCD symptoms among university students. Therefore, the present study investigates the prevalence of OCD symptoms among university students and its relationship with demographic factors, including age, gender, achievement, and course of study. The research questions addressed in the present study are as follows:

- Q1. What is the percentage of OCD symptom prevalence among university students?
- Q2. Are there gender differences in the prevalence of OCD symptoms?
- Q3. Are there differences in the prevalence of OCD symptoms between different colleges (humanities vs science)?
- Q4. Is there a correlation between OCD symptom scores on the Y-BOCS, age, and achievement?

Method

Participants

The current study was conducted in 2019, using an available sample. A total of 584 students from (278 men, 306 women) attending participated in the study. All attended Mu'tah University in Karak in the Hashemite Kingdom of Jordan. The mean age was 19.99±1.8. All were chosen from introductory courses in scientific and humanities colleges (280 and 304 students, respectively). Humanities colleges include social sciences and education whereas scientific colleges include medicine and science. The survey instrument included socio-demographic information, consent to participate in the study, and the primary outcome measure. Participation in the study was voluntary (information about the study was provided to each course and students wishing not to participate left the class).

Ethics and consent

Ethical review of the current study was conducted in line with the principles of the committee on publication ethics (COPE). Participants provided written informed consent to participate in the study.

The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS): The Y-BOCS is an undisputed gold standard.[9] It is the semi-structural scale most often used in both clinical and research settings. The Y-BOCS has been used extensively to study OCD symptoms for research purposes (e,g., Ji et al., 2020). Although there is an Arabic version of the scale, the original scale was translated into Arabic language and back-translated into English before being referred to three clinical psychologists for the experts' construct validity. This translation was done to ensure more up to date validity and reliability.

The scale consisted of 10 items related to obsessions and compulsions rated from 0 (no symptoms) to 4 (extreme symptoms). A translation of total score into an approximate index of overall severity is as follows:

- (0-7) subclinical
- (8-15) mild
- (16-23) moderate
- (24-31) severe
- (32-40) extreme

Internal consistent validity (on a pilot sample of 30) for the ten items range between 0.641 and 0.379 whereas, the test re-test reliability was 0.784. Cronbach's α coefficient for reliability is 0.793.

Study Procedure and Analysis

Data were collected by distributing the study instrument during the study duration, and then the collected data was entered into an SPSS statistical program. The continuous variables were presented in means and standard deviations, whereas categorical variables were presented in percentages.

Results and Discussion

Q1. The results are presented as percentages of OCD symptom prevalence among university students. Table 1 shows that approximately 1.7% of the students have subclinical OCD symptoms or can be regarded as not having OCD symptoms, and approximately 98.3% have OCD symptoms (ranging between mild to extreme OCD symptoms). Approximately 39.8% of the students scored below mild while 22.9% of the students showed mild symptoms and 37.5% reported severe to extreme OCD symptoms.

Table 1. Student responses and percentages

Severity	No.	Percentage
Subclinical	10	1.7
Mild	221	37.8
Moderate	134	22.9
Severe	206	35.3
Extreme	13	2.2
Total	**584**	**100.0**

Using an agreed cut-off score of 16 out of total score of 40, the whole sample's prevalence was calculated to be 58.53%, with a higher prevalence among women. The increased prevalence of OCD symptoms among the sample study could be explained as its onset is triggered during adolescence and tends to increase with age.[10] University is considered a commutative environment where students are engrossed in proving themselves in the form of achievements, building relationships, and starting with their professional careers. These factors may be comorbid with stress, change, being away from the comfort zone, which triggers the symptoms of OCD. It is believed that women are positively affected by these symptoms compared to men in adulthood whereas, boys are commonly affected during childhood.

Al Fazari et al.[11] found that the prevalence of OCD symptoms among university students was 48.35%, with a higher prevalence among women. They also reported a relationship between college, academic achievement, and OCD symptoms. Another study in Turkey aimed to investigate the prevalence of OCD in Turkish university students. The study concluded that there is a higher prevalence of OCD among university students compared to other prevalence studies of OCD in Turkish society.[12] A recent study by Mathes et al.[13] reviewed the gender differences in OCD and concluded that a higher prevalence of OCD among girls and women might be

related to female-specific variables like puberty or pregnancy. Their symptoms may be related to contamination and/or aggressive obsessions, and they tend to report more anxiety and depression-related symptoms. One of the clinical trials also reported an increased prevalence of OCD symptoms among the female population.[14]

Q2. The overall results of the analysis showed a significant difference between men and women as scores for women were higher than the scores for men (Table 2).

For instance, 20% of women reported scores above mild whereas 17.6% of men reported scores above mild. It has also been found that anxiety disorders were two to three times higher in young women than in young men. Gender differences may be explained by puberty or pregnancy (for girls and women) and the themes of OCD itself. Another explanation of why women have a higher

prevalence than men could be linked with more childhood trauma (emotional and physical abuse). This understanding was also presented by Mathews et al.[15] who found an association between emotional abuse, physical abuse, and high levels of OCD symptoms. The association of OCD symptoms with trauma was also confirmed by Yoldascan et al.,[12] Mathis et al.,[16] Al Fazari et al.[11] and Mathes et al.[13]

Women who are pregnant or in the postpartum period are 1.5 to 2 times more likely to experience OCD symptoms than the general female population.[17] Reproductive cycle events are periods of increased risk for onset and exacerbation of OCD symptoms in women. OCD was reported by 37.6% of women at premenstrual, 33.0% during pregnancy, 46.6% postpartum, and 32.7% at menopause. Exacerbation in the first pregnancy was significantly associated with exacerbation in the second pregnancy.[18]

Table 2. X2 test (Chi-Square test) for the differences in prevalence between men and women

Severity	Men	Women	Total	X2	Df	Sig.
Subclinical	10	0	10	11.873	4	0.018*
Mild	105	116	221			
Moderate	60	74	134			
Severe	98	108	206			
Extreme	5	8	13			
Total	278	306	584			

*significant at (0.05)

Q3. The analysis showed significant differences between the two colleges where scientific colleges have higher scores than humanities colleges (Table 3). For instance, 19.7% of scientific colleges scored above mild; whereas, 17.8% of humanities colleges scored above mild OCD symptoms (Table 3). The result showed higher scores of OCD symptoms among scientific college students compared with humanities college students. This can be explained in that scientific college students tend to

experience more stress related to their field of study, such as competitiveness and high academic standards that may trigger OCD symptoms. Students in the scientific college may have more knowledge related to self-hygiene, which may trigger OCD symptoms. The results did not support some previous studies that found no significant differences between scientific and humanities college students.[11,19]

Table 3. showed the results of X2 (Chi-Square test) for the differences between colleges

Severity	Scientific	Humanities	Total	X2	Df	Sig.
Subclinical	4	6	10	20.546	4	0.000*
Mild	82	139	221			
Moderate	79	55	134			
Severe	106	100	206			
Extreme	9	4	13			
Total	280	304	584			

*significant at (0.05)

Q4. The results also depicted a weak significant negative correlation between OCD symptoms scores and achievement and between age and OCD scores (Table 4). Students experiencing OCD symptoms showed a decline in achievement because they have difficulties completing academic tasks due to preoccupation with their OCD rituals. These results are supported by Findley and Galliher[20] and Piacentini et al.[21] In addition to the fact that the dysfunctional consequences related to OCD are the impairment of achievement, avoidance of any triggering situation, there is another characteristic of that dysfunction, which sometimes makes the student reluctant to attend university. These results are in line with research by Hamid,[22] and Penn and Leonard,[23] who found that OCD affects memory, attention, concentration, and executive functions that are instrumental for achieving success.

It has been found that adolescents with OCD symptoms may withdraw socially and even waste energy and time to engage in compulsive or obsessive behaviour, which can impact adversely on their achievement.[24] Penn and Leonard[23] also stated that students diagnosed with OCD perform worse in their studies when compared with healthy students. Besides, OCD symptoms could reflect character traits that limit students' performance, such as competitiveness, ongoing tension/worry, self-criticism, dissatisfaction over performance, controlling, procrastination, and increased expectations. The above traits were found to interfere with the academic performance of university students.[23] Shahrouri[24] found the poor academic performance of high school students in Dubai were associated with OCD-related behavior,

including symptoms such as lack of confidence in executing a task, repeating activities, and failing to complete activities. Moreover, Torres et al.[19] concluded that OCD is more frequent in medical students, particularly first-year students.

Table 4. Pearson correlation coefficient between OCD score, age, and achievement

		Achievement	Age
OCD	correlation coefficient	-0.282**	- 0.219**
	Sig.	0.000	0.000

**significant at (0.05)

The current study concludes that there is an increased prevalence of OCD symptoms among university students (58.53%), with a slight increase among women compared with men and students from the scientific college compared with those attending the humanities college. Additionally, the study found a negative correlation between age and OCD symptoms, which could be explained by the fact that young people are more susceptible to stress associated with academic demands and the new adjustments made to fulfil university life requirements. Young people may lack sufficient knowledge and experience, which leaves them more vulnerable to stress-related OCD symptoms.

Results also suggest a weak negative correlation between age and achievement. Future studies need to replicate these results by including larger sample size and recruiting students from different academic disciplines.

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الملخص

الخلفية: تظهر معظم أعراض اضطراب الوسواس القهري (OCD) في مرحلة المراهقة والبلوغ المبكر. على الرغم من وجود تباين كبير في سن ظهور الوسواس القهري، هناك حاجة لملاحظة الاختلاف في سلوكات طلاب الجامعات، مما قد يؤدي إلى اضطرابات نفسية مختلفة تشمل الاكتئاب والقلق وصعوبات في العلاقات الشخصية والانتحار وتعاطي المخدرات. **الأهداف:** تهدف الدراسة الحالية البحث في انتشار أعراض الوسواس القهري بين طلاب الجامعة وعلاقتها بالمتغيرات الديموغرافية؛ الجنس والعمر والتحصيل والكلية. **الطريقة:** تكونت العينة من 584 طالباً (278 ذكور و306 إناث)، وتم استخدام مقياس بيل برون للوسواس القهري. **النتائج:** أظهرت النتائج ارتفاع معدل انتشار أعراض الوسواس القهري بين طلاب الجامعة (58.53٪) مع انتشار أعلى بين الإناث ونسبة انتشار أعلى بين طلاب الكليات العلمية. كما أظهرت النتائج وجود علاقة سلبية بين العمر والتحصيل وأعراض الوسواس القهري. **الاستنتاج:** يبدو أن طلاب الجامعة أكثر عرضة للإصابة باضطراب الوسواس القهري، والذي قد يرافقه اضطرابات نفسية أخرى أيضًا، ويضخم المشاكل لديهم، ولذلك يجب تنفيذ التدخلات المناسبة والتثقيف النفسي خلال سنوات الدراسة.

الكلمات المفتاحية: أعراض الوسواس القهري، الانتشار، طلاب الجامعة

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