

ORIGINAL ARTICLE

**Obsessive Compulsive Disorder (OCD) in psychiatric outpatient: prevalence, risk factors and gender differences in Symptomatology**

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ABSTRACT

*This study aimed to assess the prevalence and sociodemographic risk factors of OCD, in addition to the assessment of gender differences in its symptomatology. A cross sectional study was conducted at the outpatient psychiatric clinic in the Duhok City in which (637) patients were selected randomly. SCID-I/P (Version 2.0) was used to diagnose patients with OCD. The prevalence rate of OCD was (6.8%). No significant statistical association between OCD and the gender, age, educational level, marital status, occupation and the residence were found (P value = 0.874, 0.839, 0.402, 0.669, 0.740 and 0.331 respectively). The commonest obsessions were contamination (51%), aggression (20.9%) and doubt (14%). The females commonest obsessions were contamination (37.2%), doubt (9.3%) and aggression (7%). However, males commonest obsessions were contamination with the aggression (14%) for each followed by doubt (4.7%). The commonest compulsions were washing (66.6%), checking (15.1%) and counting 2(6.1%). Washing was the commonest compulsion among females (48.5%) followed by checking (9.1%) and other mental rituals (6.1%). Similarly, the washing was the commonest compulsion among males (18.2%) followed by checking (6.1%). The prevalence of OCD appeared high; strikingly no socio-demographic risk factors appeared. Commonest obsessions were contamination, aggression and doubt, while commonest compulsions were washing, checking and counting.*

*Keywords: Obsessive-compulsive disorder, demographic data, psychiatric outpatient: prevalence, risk factors*

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**INTRODUCTION**

Obsessive-compulsive disorder (OCD) is a relatively common and debilitating psychiatric disorder characterized by the presence of two distinct phenomena: obsessions (recurrent intrusive thoughts, ideas or images) and compulsions (repetitive ritualistic behaviors) [1, 2]. It has been recognized for centuries and was first described in the psychiatric literature by Esquirol in 1838 [3]. 'Obsessive - compulsive neurosis' and 'obsessive - compulsive illness' – or simply 'obsessive disorder' or 'compulsive disorder' are other terms used for the disorder [4]. The disorder causes significant impairment in terms of time (>1 hr/day), distress, and interference in daily life functioning and is estimated to be the 10<sup>th</sup> leading cause of disability in the world [5, 6].

OCD is highly familial and is regarded as a complex genetic disorder. It is thought to be associated with some dysregulation of or damage to the basal ganglia, that is why OCD symptoms may appear in diseases or syndromes that affect the area like Huntington's and Parkinson's disease [6, 7].

Common obsession-compulsion pairs include: contamination and cleaning, pathological doubt and checking, and symmetry, leading to ordering/arranging/counting (Lee 2010). Whereas the basic types of obsessions and compulsions appear to be consistent across cultures [12]

The lifetime prevalence of OCD is 2-3%; and is equally common in males and females with a bimodal age of onset, peaks occurring at 12-14 and 20-22 years of age (decline in the onset after the age of 35) [7, 8]. Patients suffering from OCD often attempt to hide their symptoms and are reluctant to discuss them due to

embarrassing or disturbing content of their thoughts leading to an under-diagnosis of OCD [9-11]. However, researches indicate that prevalence rates of OCD are similar in many different cultures around the world [1].

The effective long-term treatments for OCD include the use of serotonergic antidepressants (e.g., SSRIs, clomipramine) as well as behavioral therapy [16]. The prognosis of OCD has traditionally been considered to be poor; with new developments in behavioral and pharmacological treatments this prognosis is now considerably improved [13]. However about 2/3 of the cases improve to a degree by the end of a year [14]. The onset is usually gradual and most patients have a chronic course with waxing and waning of symptoms in relation to stressors. 15% of patients have a chronic debilitating course with noticeable impairment in social and occupational functioning [15].

The current study aimed to assess one-year prevalence and socio-demographic risk factors of OCD in outpatient psychiatric clinic in addition to the study of gender differences in symptomatology.

## MATERIAL AND METHODS

This cross sectional study carried out in the outpatient psychiatric clinic in Azadi Teaching Hospital in Duhok City from 1<sup>st</sup> July 2011 to 2<sup>nd</sup> July 2012, in which (637) patients who were 18 years old and more of both genders were selected randomly. The verbal consent was taken from all patients before their participation.

Structured Clinical Interview for DSM-IV Axis I Disorders-Patient Edition (SCID-I/P) (version 2.0) was applied to diagnose patients with OCD [17].

The socio-demographic data included the residence (urban and rural areas); in this study the centers of the districts in Duhok Governorate were regarded as urban areas only. Statistical Package for the Social Sciences (SPSS), version 21, was used for data analysis. Pearson Chi Square and Fisher's Exact Test were used to assess the association between two categorical variables. A *P*-value  $\leq 0.05$  was considered statistically significant.

## RESULTS

In this study, the estimated prevalence of OCD was 6.75% (43 cases). In regard to the sociodemographic characteristics of the gender among the OCD patients, 13 cases (72.1%) of the males were from the youngest age group (18-25 years), while, 8 cases (32%) of the females were from the same age group (18-25 years) and a similar percentage from the (26-33 years) age group. Fifty % of the males, 9 cases, were from the secondary education level group, however 15 cases (60%) of females were illiterate. Thirteen cases (72%) cases of the males were married, while 14 cases (56%) of the females were single. In regards to the occupation, 6 cases (22.2%) were students, while 14 cases (56%) of the females were housewives. Nearly, a similar percentage of both gender were from the urban area, 11 cases (61.1%) of males, and 16 cases (64%) of females. (Table 1)

Although it was more prevalent among females 25 cases (58.1%), the youngest age group (18-25 years), 21 cases(48.8%), illiterate 19 cases (44.2%), singles 24 cases(55.8%), housewives 14 cases (32.6%) and those from urban areas 27 cases (62.8%) but no significant association between OCD and the gender, age, educational level, marital status , occupation and the residence were found. *P* value = 0.874, 0.839, 0.402, 0.669, 0.740 and 0.331 respectively. (Table 2)

The most common presenting obsessional symptom was contamination 22 (51%) followed by aggression 9(20.9%) and doubt 6(14%).The religious obsessions comprised 7% (3 cases), while only one case (2.3%) had obsessions of sex, symmetry and somatic (All they were males).

Among the females the commonest presenting obsession was contamination 16(37.2%), followed by doubt 4(9.3%) and aggression 3(7%). However, among males the commonest obsessions were contamination and aggression, which carry the same rate 14% (6 cases for each) followed by doubt 2 (4.7%). (Table 3)

Thirty three cases of OCD patients had compulsions; comprised 76.7% of cases, the commonest compulsion was washing 22 (66.6%) followed by checking 5(15.1%) and counting 2(6.1%).

Washing was the commonest compulsion among females 16(48.5%) followed by checking 3 (9.1%) and other mental rituals 2 (6.1%). Similarly, the washing was the commonest compulsion among males 6 (18.2%) followed by checking 2 (6.1%). (Table 4)

## DISCUSSION

### Prevalence

In this study, the estimated prevalence of OCD was 6.8%, whereas a higher rate had been reported in psychiatric outpatient clinics (11.7%) in Wahla *et al* study conducted in Germany [42]. Likewise, [35] reported that some researchers have estimated that OCD is found in as many as 10 % of outpatients in

psychiatric clinics. However, [19] described that the frequency of OCD in psychiatric practice may be significantly lower than in the general population, which may be related to the intense shame and secrecy associated with this illness and the patients' reluctance to disclose their symptomatology.

### **Sociodemographic risk factors**

In the current study, no significant statistical association between OCD and the gender, age, educational level, marital status, occupation and the residence were found.

Similarly, the prevalence rate of OCD was slightly higher among females, but the difference was statistically not significant according to [20] study from Turkey. Likewise, OCD appeared more common in females than males, according to [21] study, which conducted among general population in Iran. Other studies showed female's predominance like [39-41] studies. Furthermore, [22] reported that patients with OCD were almost universally characterized by a predominance of females. Similarly, [14] stated that unlike other neuroses, OCD is only slightly more common in women than men. However, significant associations between OCD and male gender appeared in [44] study, which conducted among Turkish university students. As well, males were more affected than females in other studies, like Egyptian study conducted by [32, 36, 39] studies.

In regard to the age, nearly half of the cases were from the youngest age group but without significant association. In contrast, young age group (21-30) regarded as risk factors, according to [33] study. Nevertheless, [9] found that a significant proportion of the studies point out that late adolescence is a period of increased vulnerability for the development of OCD. The mean age of onset is about 20 years, according to [35] while [34] reported that 65% of patients have their onset prior to age 25 years and 15% over the age of 35 years.

Although most of the cases were illiterate, but without significant association to the OCD. However, the illiterate regarded as risk factors in [35] study.

Concerning the marital status, more than fifty percent of the cases were singles. [35] stated that single persons are more frequently affected with OCD than married, although this finding perhaps reflects the difficulty that persons with the disorder have maintained a relationship. Most of the females were singles and most of the males were married in the current study. However, females were more likely to be married according to [16, 17] studies, and male patients were more likely than females to be single according to [39, 21] studies.

In regard to the occupation, similarly, no significant difference was found in relation to employment according to [3] study. Conversely, significant association between occupation and OCD appeared in Mohammadi *et al.* [27] study in which the rate of OCD in unemployed subjects was less than householders.

### **Obsessions**

The most common presenting obsessional symptom (in both genders) was contamination (51%) followed by aggression (20.9%) and doubt (14%). The religious obsessions comprised (7%), while (2.3%) had obsessions of each of sex, symmetry and somatic (All they were males).

Similarly (to a degree), the most commonly occurring obsessions, among Turkish patients were contamination (56.7%), aggression (48.9%), and somatic (24.1%), followed by religious (19.9%), symmetry (18.4%), and sexual imagery (15.6%) according to [19] study. In Bahrain study conducted by [36] (38%) of the patients displayed obsessional thoughts related to dirt and contamination, while (40%) showed religious and blasphemous obsessional thoughts and doubts. Whereas, most commonly occurring obsessions were religious and contamination obsessions (60%) followed by somatic obsessions (49%) in [30] study. While contamination, symmetry, and hoarding were the most common symptom subtypes according to [2] study. Ebert *et al.* [6] reported that contamination fears are present in approximately (50%) of OCD patients and pathologic doubt in (40%).

However, in an Iranian study conducted by [9] doubts and indecisiveness were the most common obsessions. Whereas the most prevalent obsession was fear of harming (81.25%) according to [34] study, and higher frequency of sexual, exactness and symmetry obsessions were reported in [24] study. While (42%) of the patients were found to have religious obsessions in [40] study. On the other hand, the most common symptom dimensions were symmetry (67.6%), contamination (43.2%), and aggression (31.7%) in a Chinese study conducted by [12].

In the current study, the female's commonest presenting obsession was contamination (37.2%), followed by doubt (9.3%) and aggression (7%). While male's commonest obsessions were contamination and aggression, which carry the same rate (14%) followed by doubt (4.7%). And whole cases of sex, symmetry and somatic obsessions were males. According to [22] study, contamination/cleaning dimensions were significantly higher in females; and sexual/religious dimensions were lower in females.

Similarly, female patients present more with contamination/cleaning symptoms, according to [4, 12], [17] studies. While the most common obsessions were aggressive, contamination and miscellaneous in

postpartum OCD patients according to [46] study. Also a significantly higher frequency of contamination obsessions observed in females and that of aggression and sexual obsessions in males in [41] study. However, males had more symmetry/religious obsessions in [16] study and had more sexual-religious and aggressive symptoms, according to [11] study. Men were significantly more likely to present sexual, religious, and symmetry obsessions and mental rituals according to [39] study and blasphemous thoughts in [9] study.

Strikingly, in the current study, no hoarding obsessions were recorded, this could be explained that keeping things and thrifty could be regarded as normal practice according to Kurdish culture and difficult to be considered as pathological. Furthermore, low prevalence of sexual obsessions could be due to that sexual issues are regarded as social taboo in Kurdish society and the patient find it difficult to disclose them, similar to a degree the religious obsessions.

**Compulsions**

In this study, (76.7%) of OCD patients had compulsions (in addition to obsessional symptoms); higher percentage had been reported by [8] (96%) and only (10-25%) of cases are purely obsessiveness according to [43, 44]. Similarly, more than (70%) of patients report both obsessions and compulsions among clinic attenders according to (Weissman *et al.* 1994) study. However, (68.5%) had both obsessions and compulsions in [3] study and (56%) percent of the patients had compulsions in (Shooka *et al.* 1998) study. While only (40%) of patients presented with a mixture of obsessions and compulsions according to [30] study. Also a preponderance of mixed obsessions and compulsions were reported by (Fontenelle *et al.* 2004) study and obsessions were found to be more frequently experienced than compulsions in [20] study. Similarly, Clark and Guyitt [4] reported that although some people with OCD experience obsessions only or compulsions only, most of them experience both.

The commonest compulsions (in both genders) were washing (66.6%) followed by checking (15.1%) and counting (6.1%). Similarly, washing was the most common compulsion in (Ghassemzadeh *et al.* 2002) study. Likewise the most common compulsion was washing/cleaning and checking according to [46] study. However, cleaning and washing compulsions comprised (63%), and checking compulsions (58%) in [30] study. While checking was the most prevalent form of OCD according to [10] study.

Table 1: The sociodemographic characteristics of the gender among OCD patients

Variables	Gender	
	Female No. (%)	Male No. (%)
18-25	8(32)	13(72.1)
26-33	8(32)	3(16.7)
34-41	6(24)	0(0)
42-49	0(0)	1(5.6)
≥ 50	3(12)	1(5.6)
Educational level		
Illiterate (0 years)	15(60)	4(22.2)
Primary (1-6 years)	4(16)	3(16.7)
Secondary (7-12 years)	3(12)	9(50)
Higher (≥13 years)	3(12)	2(11.1)
Marital status		
Single	14(56)	5(27.8)
Married	11(44)	13(72.2)
Widow	0(0)	0(0)
Divorced	0(0)	0(0)
Occupation		
Housewife	14(56)	0(0)
Unemployed	7(28)	5(27.8)
Student	4(16)	6(33.3)
Employed	0(0)	4(22.2)
Self-employed	0(0)	3(16.7)
Retired	0(0)	0(0)
Residence		
Urban	16(64)	11(61.1)
Rural	9(36)	7(38.9)
Total	25(100)	18(100)

Washing was the commonest compulsion among females (48.5%) followed by checking (9.1%) and other mental rituals (6.1%). Likewise, the washing was the commonest compulsion among males (18.2%) followed by checking (6.1%). Other studies similarly showed that female subjects were more likely to have cleaning compulsions like [5, 16, 12] studies. Whereas, orderliness compulsions were more common in men in [11] study. However, no significant difference in terms of the frequency of compulsions appeared between males and females according to [40] study.

In our study, the frequency of some dimensions (whether obsessions or compulsions) is different from what has been reported in other studies conducted in some Western and Eastern countries even from studies done in the Middle East. This could be explained that the sociocultural factors playing a role in determining the character of the symptom presentation. However, the methodological differences, especially in regard to sample studied and instrument used should keep in mind.

Table 2: The association of sociodemographic characteristics to OCD

Variables	OCD		Total	P- value
	Positive No. (%)	Negative No. (%)		
<b>Gender</b>				
Female	25(58.1)	333(56.1)	358	0.874*
Male	18(41.9)	261(43.9)	279	
<b>Age (Years)</b>				
18-25	21(48.8)	298(50.2)	319	0.839**
26-33	11(25.6)	146(24.6)	157	
34-41	6(14)	69(11.6)	75	
42-49	1(2.3)	37(6.2)	38	
≥ 50	4(9.3)	44(7.4)	48	
<b>Educational level</b>				
Illiterate (0 years)	19(44.2)	219(36.9)	238	0.402**
Primary (1-6 years)	7(16.3)	168(28.3)	175	
Secondary (7-12 years)	12(27.9)	145(24.4)	157	
Higher (≥13 years)	5(11.6)	62(10.4)	67	
<b>Marital status</b>				
Single	24(55.8)	291(49)	308	0.669**
Married	19(44.2)	289(48.7)	315	
Widow	0(0)	8(1.3)	8	
Divorced	0(0)	6(1)	6	
<b>Occupation</b>				
Housewife	14(32.6)	184(31)	198	0.740**
Unemployed	12(27.9)	123(20.7)	135	
Student	10(23.3)	133(22.4)	143	
Employed	4(9.3)	92(15.5)	96	
Self-employed	3(7)	56(9.4)	59	
Retired	0(0)	6(1)	6	
<b>Residence</b>				
Urban	27(62.8)	345(58.1)	372	0.331*
Rural	16(37.2)	249(41.9)	265	
Total	43(100)	594(100)	637	

\* Fisher's Exact Test; \*\*Pearson Chi - Square

Table 3: Obsessional symptoms of OCD

Symptoms	Both genders No. (%)	Females No. (%)	Males No. (%)
Contamination	22(51.2)	16(37.2)	6(14)
Aggression	9(20.9)	3(7)	6(14)
Doubt	6(14)	4(9.3)	2(4.7)
Religious	3(7)	2(4.6)	1(2.3)
Sexual	1(2.3)	0(0)	1(2.3)
Symmetry	1(2.3)	0(0)	1(2.3)
Somatic obsessions	1(2.3)	0(0)	1(2.3)
Total	<b>43(100)</b>	<b>25(58.1)</b>	<b>18(41.9)</b>

Table 4: Co mpulsions in OCD

Symptoms	Both genders No. (%)	Females No. (%)	Males No. (%)
Washing	22(66.6)	16(48.5)	6(18.2)
Checking	5(15.1)	3(9.1)	2(6.1)
Counting	2(6.1)	1(3)	1(3)
Arranging	1(3)	0(0)	1(3)
Other mental rituals	3(9.1)	2(6.1)	1(3)
Total	<b>33(100)</b>	<b>23(69.7)</b>	<b>10(30.3)</b>

## CONCLUSIONS

The prevalence of OCD appeared high; no socio-demographic risk factors appeared. Commonest obsessions were contamination, aggression and doubt, the female's commonest presenting obsession was contamination followed by doubt and aggression while male's commonest obsessions were contamination and aggression which carry the same rate followed by doubt. Commonest compulsions were washing, checking and counting. Washing and checking were the commonest compulsions among females and males. The difference in the frequency of some dimensions (obsessions and compulsions) in our study in compare to other studies conducted elsewhere in different communities may emphasize the influential role of sociocultural factors in the shaping and the emergence of the OCD symptoms.

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## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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