

## Body Image and Somatic Complaints in Patients with Obsessive Compulsive Disorder

### Obsesif Kompulsif Bozukluğu Olan Hastalarda Beden İmajı ve Somatik Şikayetler

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#### ÖZ

**Amaç:** Obsesif kompulsif bozukluk (OKB) tanısı almış bireylerde beden algısı ve somatizasyon düzeylerini araştırmayı amaçladık. **Araçlar ve Yöntem:** Çalışmaya dahil edilme ve dışlanma kriterlerini karşılayan 84 OKB tanılı hasta dahil edildi. Katılımcılara DSM için Yapılandırılmış Klinik Görüşme (SCID-5), Yale Brown Obsesif Kompulsif Bozukluk Ölçeği (Y-BOCS), Beden İmgesi Ölçeği (BİS), Bradford Somatik Envanteri (BSI-44) uygulanmıştır.

**Bulgular:** Katılımcılarda en sık görülen obsesyonun kirlenme olduğu, bunu sırasıyla diğer obsesyonlar grubunun ve saldırganlığın izlediği görülmüştür. En sık görülen kompulsiyonun kontrol etme kompulsiyonu olduğu, bunu sırasıyla temizlik ve tekrarlayıcı ritüelistik kompulsiyonların izlediği görülmüştür. Katılımcıların Y-BOCS puan ortalamasının 21.7±7.7, BIS puan ortalamasının 137.6±26.3 ve BSI-44 puan ortalamasının 25.8±17.8, kadınların BIS puan ortalamasının erkeklerden istatistiksel olarak anlamlı düzeyde düşük olduğu, diğer ölçeklerde ise kadın ve erkekler arasında anlamlı bir fark olmadığı belirlenmiştir. Düzen ve organize etme kompulsiyonu olanlarda beden imajının daha yüksek olduğu görülmüştür. Somatizasyon ise biriktirme, simetri, somatik ve tekrarlayıcı ritüel kompulsiyonları olanlarda daha yüksek bulunmuştur.

**Sonuç:** OKB hastalarının beden imajı ve somatizasyon düzeyi hem sosyodemografik özelliklere hem de obsesyon ve kompulsiyon türlerine göre değişmektedir. Bulgularımız bu konudaki çok sınırlı literatüre önemli bir katkı sağlamaktadır.

**Anahtar Kelimeler:** beden imgesi; bozukluk; kompulsiyon; obsesyon; somatizasyon

#### ABSTRACT

**Purpose:** We aimed to investigate body image and somatisation levels in individuals diagnosed with obsessive-compulsive disorder (OCD).

**Materials and Methods:** A total of 84 patients diagnosed with OCD who met the inclusion and exclusion criteria were included in the study. Participants were assessed using the Structured Clinical Interview for DSM (SCID-5), Yale-Brown Obsessive Compulsive Scale (Y-BOCS), Body Image Scale (BIS), and Bradford Somatic Inventory (BSI-44).

**Results:** The most common obsession among participants was contamination, followed by other obsessions and aggression, respectively. The most prevalent compulsion was checking, followed by cleaning and repetitive ritualistic behaviors. Participants had a mean Y-BOCS score of 21.7 ± 7.7, a mean BIS score of 137.6 ± 26.3, and a mean BSI-44 score of 25.8 ± 17.8. Female participants had significantly lower BIS scores compared to males, while no significant differences were found between genders on other scales. Participants with ordering and arranging compulsions showed higher body image concerns. Somatization was found to be higher among individuals with hoarding, symmetry, somatic, and repetitive ritualistic compulsions.

**Conclusion:** Body image and somatisation level of patients with OCD vary according to both sociodemographic characteristics and types of obsessions and compulsions. Our findings make an important contribution to the very limited literature on this issue.

**Keywords:** body image; compulsion; disorder; obsession; somatisation

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## INTRODUCTION

Obsessive compulsive disorder (OCD) is a mental disorder characterised by recurrent obsessions and/or compulsions that may cause high levels of anxiety and distress, often showing an episodic course and significantly affecting the functionality of the individual.<sup>1,2</sup> Obsessions are persistent and compulsive thoughts or images that the person cannot control voluntarily, that come to mind persistently and compulsively, that cause high levels of anxiety and are repetitive. Compulsions, on the other hand, are repetitive and purposeful ritualistic behaviours or mental actions that the individual feels obliged to perform in response to obsessions or within the framework of certain rules.<sup>1,3</sup> When the individual tries to prevent these compulsions, he/she experiences intense anxiety.

It is stated that obsessions are more common in male and compulsions are more common in female. Among the types of obsessions, sexual and religious obsessions are common in male and obsessions of contamination are common in female. Among the compulsion types, control compulsion is common in male and cleaning compulsion is common in female.<sup>4,5</sup>

Somatization is a prevalent yet complex issue that straddles the realms of psychiatry and general medicine. It manifests as physical symptoms either in conjunction with psychological symptoms or independently. These symptoms typically lack an identifiable organic cause or are disproportionately severe relative to any organic pathology present.<sup>6</sup>

The prevalence rate of diseases characterised by somatic symptoms is thought to be between 15-20%.<sup>7</sup> Although it can be seen at almost any age, it is most commonly seen between the ages of 20-30. While it is frequently observed in eastern societies, it is less common in western societies. It is emphasised that it is seen more frequently in people with low education and socioeconomic level.<sup>8</sup> It has been observed that the association with obsessive-compulsive personality disorder and avoidant personality disorder is common.<sup>9</sup>

The aim of this descriptive study was to describe the levels

of body satisfaction and somatization in individuals diagnosed with obsessive-compulsive disorder (OCD) in a tertiary referral center.

## MATERIALS and METHODS

The protocol of the study was conducted in accordance with the ethical standards of the institutional. Permission for the study was obtained from Recep Tayyip Erdoğan University Faculty of Medicine Non-Interventional Clinical Research Ethics Committee (date 05.03.2020 and number 2020/34) and the Declaration of Helsinki and its subsequent revisions or comparable ethical standards. Patients were informed about the study and written informed consent was obtained.

This study included 84 adults who applied to the outpatient clinic between 01 March 2020 and 01 May 2022 and met the inclusion and exclusion criteria. The study included those who were diagnosed with OCD according to DSM-5, between the ages of 18-65, had not been using psychotropic drugs for at least 6 months, had a body mass index value between 18.5 kg/m<sup>2</sup> and 24.9 kg/m<sup>2</sup>, did not work in heavy work requiring muscle strength or did not do sports, did not have a condition that prevented interviewing or applying the scales, and were literate.

Those who had another psychiatric diagnosis other than OCD according to DSM-5, who had alcohol or substance use disorder, who had additional chronic medical, physical or neurological diseases, who were actively using psychotropic drugs, who were pregnant or breastfeeding, who had a body mass index value between 18.5 kg/m<sup>2</sup> and 24.9 kg/m<sup>2</sup>, who worked in heavy work requiring muscular strength and who did sports were excluded from this study. Age, sex (assigned at birth), marital status and medical history of all patients were questioned. Y-BOCS, BIS and BSI-44 scales were administered to all patients and the results were noted.

Statistical analysis of the data obtained from this study was performed with SPSS 25.0.1 package programme (IBM Co., Armonk, NY, USA). The conformity of continuous variables to normal distribution was evaluated by Shapiro Wilk test. The data are summarised as mean  $\pm$  standard deviation in this text. For the variables conforming to normal

distribution, the means of two independent groups were compared by Student t test and the means of more than two groups were compared by one-way ANOVA. Categorical variables are shown as number and percentage. The relationships between categorical variables were investigated by Chi-Square analysis. Pearson Chi-Square test statistic obtained as a result of this analysis was used. Correlation analysis was performed for the relationships between continuous variables and Pearson correlation coefficient was used. Statistical significance level was taken as  $p < 0.05$  for all comparisons.

### RESULTS

Of all cases, 66 (78.6%) were female and 18 (21.4%) were male. The mean age of all patients was  $30.9 \pm 8.7$  years, with a minimum age of 18 and a maximum age of 61 years. Of the patients, 44 (52.4%) were married and 38 (45.2%) were single. Eight (9.5%) of the participants were primary school and 45 (53.6%) were university graduates. Seventeen (20.2%) of the patients were public employees, 40 (47.6%) were unemployed and 12 (14.3%) were students. Sixty-one (72.6%) of the patients had a family history of psychiatric illness. (Table 1)

The highest obsession type was contamination, which was observed in 72 (85.7%) of the patients, followed by aggression ( $n=61$ , 72.6%), symmetry ( $n=48$ , 57.1%) and religious obsession ( $n=44$ , 52.4%). The least common obses-

sion was sexual obsession ( $n=16$ , 19%). Controlling compulsion ( $n=68$ , 81%) ranked first in the ratio of compulsion types among the participants. This was followed by cleaning ( $n=58$ , 59%), repetitive ritual ( $n=44$ , 52.4%) and ordering arrangement compulsion ( $n=32$ , 38.1%), while the least rate was found to be accumulation compulsion ( $n=7$ , 8.3%). (Table 2)

The mean BIS score of all participants was  $137.6 \pm 26.3$ , with a minimum score of 77 and a maximum score of 197. The mean BIS total score was  $134.6 \pm 24.8$  in female and  $148.7 \pm 29.3$  in male. Body image was statistically significantly negative in female compared to male ( $p=0.042$ ). The mean BSI-44 score of all participants was  $25.8 \pm 17.8$ , with a minimum of 1 and a maximum of 79 points. The mean BSI-44 score was  $26.5 \pm 18.6$  in female and  $23.1 \pm 14.5$  in male. There was no statistically significant difference between genders ( $p=0.691$ ). When the correlation of the scales with each other was analysed, a statistically significant correlation was found between the total score of Y-BOCS and its subscales, obsessions and compulsions scores, and BIS and BSI-44. There is a statistically significant, negative, moderate correlation between BIS and BSI-44. ( $r=-0.521$ ,  $p < 0.001$ ). (Table 3)

The relationship between the demographic data of the patients and the percentages of having obsessions and compulsions is shown in Supplement Table 4.

Table 1. Demographic data of the patients.

Variables	N	%	Mean	SD	
<b>Gender</b>					
Female	66	78.6			
Male	18	21.4			
<b>Marital Status</b>					
Married	44	52.4			
Single	38	45.2			
Divorced	1	1.2			
Widow	1	1.2			
<b>Education Status</b>					
Elementary	8	9.5			
Secondary	10	11.9			
High school	21	25			
University	45	53.6			
<b>Occupation</b>					
Public	17	20.2			
Private	7	8.3			
Self-employed	8	9.5			
Unemployed	40	47.6			
Student	12	14.3			
			<b>Age (years)</b>		
			Female	30.95	8.129
			Male	30.72	10.9
			N		%
			<b>Place</b>		
			Rural	19	22.6
			Urban	65	77.4
			<b>Who does live with?</b>		
			Family	43	51.2
			Parents	38	45.2
			Alone	3	3.6
			<b>Income (minimum wage)</b>		
			Below	23	27.4
			Once	25	29.8
			Twice	29	34.5
			Three times	7	8.3
			<b>History</b>		
			Yes	61	72.6
			No	23	27.4

**Table 2.** Data on the obsession and compulsion types of the patients (by Y-BOCS).

Type of obsessions		N	%	Type of compulsion		N	%
<b>Aggression</b>	Yes	61	72.6	<b>Cleaning</b>	Yes	58	59
	No	23	27.4		No	26	31
<b>Contamination</b>	Yes	72	85.7	<b>Controlling</b>	Yes	68	81
	No	12	14.3		No	16	19
<b>Sexual</b>	Yes	16	19	<b>Repetitive Ritual</b>	Yes	44	52.4
	No	68	81		No	40	47.6
<b>Accumulation</b>	Yes	40	47.6	<b>Counting</b>	Yes	23	27.4
	No	44	52.4		No	61	72.6
<b>Religious</b>	Yes	44	52.4	<b>Ordering - Arrangement</b>	Yes	32	38.1
	No	40	47.6		No	52	61.9
<b>Symmetry</b>	Yes	48	57.1	<b>Accumulation</b>	Yes	7	8.3
	No	36	42.9		No	77	91.7
<b>Somatic</b>	Yes	43	51.2	<b>Other</b>	Yes	23	27.4
	No	41	48.8		No	61	72.6
<b>Other</b>	Yes	63	75				
	No	21	25				

**Table 3.** Data on patients' BIS and BSI-44 scores and correlation analysis of the scales.

Variables	N	Min	Max	Mean	SD	p
<b>BIS</b>						
<b>Female</b>	66	77	185	134.545	24.772	0.042*
<b>Male</b>	18	107	197	148.722	29.297	
<b>Total</b>	84	77	197	137.583	26.279	
<b>BSI-44</b>						
<b>Female</b>	66	1	79	26.53	18.597	0.691
<b>Male</b>	18	3	51	23.056	14.445	
<b>Total</b>	84	1	79	25.786	17.766	
<b>BSI-44 BIS</b>						
<b>Y-BOCS (Total)</b>	r	0.118	0.049			
	p	0.284	0.653			
<b>Y-BOCS (Obsession)</b>	r	0.159	0.046			
	p	0.148	0.679			
<b>Y-BOCS (Compulsion)</b>	r	0.054	0.041			
	p	0.628	0.709			
<b>BIS</b>	r	-0.521	-			
	p	<0.001*				

**DISCUSSION**

So far, we have not found any research on body image and somatisation in OCD patients in the literature. OCD is a disease with a rich clinical diversity due to many factors affecting its clinical presentation and many types of obsessions and compulsions. Patients often have more than one type of obsessions and/or compulsions.<sup>10,11</sup> In the literature, reported that the most common type of obsession is contamination.<sup>1,2</sup> In our study, contamination obsession was the obsession with the highest rate among the patients in accordance with the literature.

The need to know and remember under the heading of other obsessions, lucky and unlucky numbers and superstitious beliefs, followed by obsession of aggression were found to be the most common types of obsessions. While a

similar ranking was observed in the female, in the male, found that the obsession of contamination maintained the first rank, the obsession of aggression was the second most common obsession, followed by the need to know and remember under the heading of other obsessions, lucky and unlucky numbers and superstitious beliefs.

When the types of compulsions were analysed, found that controlling, cleaning and repetitive ritualistic compulsions were the most common compulsions, respectively, and this order was preserved in both male and female and there was no statistical difference between them. The least common compulsion type in both genders was accumulation compulsion.

The least common obsession type in both genders was sexual obsessions. When the types of obsessions were

compared in male and female, symmetry and somatic obsessions were statistically significantly higher in female ( $p=0.021$  and  $p=0.025$ , respectively). When the literature is examined, it is seen that contamination and suspicion obsessions and cleaning and controlling compulsions are in the first rank in the results obtained from the studies.<sup>11-14</sup> Since there is no sub-heading of obsessions of suspicion in Y-BOCS, obsessions of suspicion are also evaluated by semi-structured interview techniques and clinical examination in these studies. In our study, we did not use any other scale or interview technique other than the Y-BOCS to investigate the types of obsessions and compulsions. Similar to our study, other studies using the Y-BOCS showed a high rate of aggression obsessions.<sup>14,15</sup> In the Y-BOCS, obsessions that do not involve direct aggression, such as the fear of committing an embarrassing behavior or saying an obscene word, are also evaluated under the category of aggression obsession. This may explain the higher prevalence of the aggression obsession type.

There are many factors affecting both the perceptual and attitudinal dimensions of body image (sensory, intellectual, behavioral and satisfaction). Body dysmorphic disorder (BDD), which is in the category of obsessive-compulsive disorder related disorder (OCDRD), is at the forefront among the pathologies seen with disorder in the perceptual dimension. In BDD, the person has the idea that he/she has an imaginary defect in his/her physical appearance, or even if there is a slight defect, this defect is much more extreme than it is, and constantly has mental preoccupations about his/her body.<sup>2</sup> Excessive mental preoccupation with the perceived defect, repetitive behaviors such as frequent looking in the mirror and mental actions such as comparing their physical appearance with others make this disorder similar to OCD.

Skin picking disorder (SPD), another disorder in the category of OCD, can lead to compulsive and repetitive skin picking as a result of uncontrollable impulses, physical deterioration and severe tissue damage that may require dermatological or surgical treatment. In trichotillomania, which is also in the OCDRD category, recurrent hair plucking behavior that causes hair loss at a level noticeable by others is observed. In the affected area, short and broken hairs are seen together with normal hair and the patient

tries to hide the baldness. In both disorders, body image is affected by these physical changes. It has been reported that anorexia nervosa and orthorexia nervosa, which have not yet been included in the diagnostic categories, share some characteristics with OCD and their co-occurrence is frequent.<sup>16, 17</sup> It is emphasized that both eating disorders and orthorexia nervosa have obsessive-compulsive symptoms and these symptoms are egosyntonic.<sup>18</sup> Eating disorders, orthorexia nervosa and OCD have common features such as perfectionism, elaboration, strict rules and ritualistic behaviors. There are many studies showings that body image is impaired in eating disorders and orthorexia nervosa.<sup>19,20</sup>

In our study, in which we investigated body image in OCD patients based on the information that body image is impaired both in some diseases in the OCDRD category and in some diseases that are frequently associated with OCD, we found that participants diagnosed with OCD had good body image, although not very high, with a mean of  $137.6 \pm 26.3$ . In addition, no significant correlation was observed between OCD disease severity and body image. In the limited literature on this subject, an inverse relationship between OCD and body image has been reported.<sup>21</sup> Our finding is not consistent with this literature. The reason for this situation may be the change in the type of obsession that individuals diagnosed with OCD have with the effect of the culture they live in and the increase in mental preoccupations due to this, and the interest in the body decreases and prevents the negativity in body image.

When we looked at somatization according to obsession and compulsion subtypes, we found that somatisation was significantly higher in those with obsessions of accumulation, symmetry, need to know and remember under the heading of somatic and other obsessions, lucky and unlucky numbers and superstitions ( $p=0.026$ ,  $p=0.024$ ,  $p<0.001$  and  $p=0.03$ , respectively). The fact that both somatic obsessions and somatisation directed attention to bodily symptoms suggests that this significant relationship between the two conditions cannot be coincidental. Among compulsions, somatisation was significantly higher only in individuals with repetitive and ritualistic compulsions ( $p=0.039$ ). Individuals with contamination obsession or thoughts of sinfulness wash their whole body or

some body parts ceremonially in a certain number and order due to both cleaning and repetitive ceremonial compulsions, and the possibility of various dermatological lesions increases due to excessive exposure to chemical cleaning materials. Repetitive and ceremonial compulsions may be related to somatisation as they cause dermatological lesions as well as physical symptoms such as muscle joint pain, headache, etc. when they are performed in excess, in a certain number and order that exceed the original purpose of the action.

When we analyzed the distribution of obsession and compulsion types according to sociodemographic characteristics, we found that there was a difference only according to occupation and marital status. We found that sexual obsession was statistically significantly higher in singles compared to marrieds ( $p=0.021$ ). OCD symptoms may lead to various adjustment problems and cause individuals not to get married or to experience various problems in their marriages if they are married. Although there is limited data on this subject in the literature, it is thought that obsessions and compulsions may have negative effects on individuals' decision to marry and on marital adaptation. This interpretation needs to be supported by new studies to be conducted in this situation. In the occupational groups, we found that symmetry obsession was significantly higher in the unemployed group than in the other occupational groups ( $p=0.037$ ). The order and discipline expectations of individuals with symmetry obsession make life difficult for both themselves and the people around them. The work they have to do can take hours with compulsions such as sorting, organizing, doing in a certain number and order, touching, rubbing, not stepping on shapes and lines, aiming to reduce dissatisfaction, discomfort or inadequacy associated with the feeling that the work is not correct or incomplete. In addition, it is thought that having the same expectations for the people they work with may disrupt their social relations and professional harmony. These reasons may cause individuals with symmetry obsession and related behavioral patterns to be unable to persevere in their professions or to be selective in their choice of profession, thus leading to unemployment.<sup>15</sup>

It has been reported that female use somatisation 5-10 times more than male.<sup>22</sup> In our study, although not statistically significant, observed that female used somatisation more than male in accordance with the literature. In addition, found that female gave statistically significantly higher scores than male to the BSI-44 sub-questions "Have you ever felt pain in your legs?" and "Have you ever had difficulty breathing even while resting?" ( $p=0.047$  and  $p=0.034$ , respectively).

Limitations of this study include the lack of a control group, and the body image and somatisation levels in patients with OCD could not be compared with the healthy group. The age of onset of the disease and the time of first application for treatment were not questioned. In addition, the sample size was not large enough, which may have affected the statistical results. Participants may not have been able to express some of their obsessions because they were against religious and moral values. This may have affected the ranking of obsessions and compulsions obtained from this study. The lack of a control group is another limitation of the study.

Strengths of the study, this is the first study investigating body image and somatization in OCD. There are very few studies in the literature evaluating body image and somatization separately in OCD. Therefore, we think that our study will make an important contribution to the literature. The BSI-44, which we used to assess somatization, is a relatively new scale in this field, with a validity and reliability study conducted in Turkey in 2017.

We think that the use of a new scale makes our study more valuable. In addition, the fact that SCID-5, the clinical interview form of DSM-5, which is the current version of the classification systems, was used in our study is one of the important features of our study.

In conclusion, sexual obsession was higher in those who were single and symmetry obsession was higher in those who had unemployed. Compulsion severity was higher in marrieds. While all participants had good body image, female had lower body image compared to male. In addition, body satisfaction was high in those with ordering-arrangement compulsions.

### Conflict of Interest

The authors declare that there is not any conflict of interest regarding the publication of this manuscript.

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### Ethics Committee Permission

The study was approved by the Recep Tayyip Erdoğan University Faculty of Medicine Non-Interventional Clinical Research Ethics Committee (date 05.03.2020 and number 2020/34)

### Authors' Contributions

Concept/Design: ABÖ, DS, BB. Data Collection and/or Processing: MB, MP, AB. Data analysis and interpretation: AB, MP, DS. Literature Search: DS, MP, AB. Drafting manuscript: ABÖ, MB. Critical revision of manuscript: ABÖ, MB, BB. Supervision: MB, BB.

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