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Level of Insight and Clinical Features of Obsessive-Compulsive Disorder with and Without Body Dysmorphic Disorder

Ana Cristina Gargano Nakata, MD, Juliana B. Diniz, MD, Albina R. Torres, MD, PhD, Maria Alice de Mathis, BS, Victor Fossaluza, BS, Carlos Alberto Bragança, PhD, Ygor Ferrão, MD, PhD, and Euripedes C. Miguel, MD, PhD

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Needs Assessment
This article contributes with a global analysis about the association of obsessive-compulsive disorder and body dysmorphic disorder, according to clinical features and insight. The objectives are to stimulate the researcher's interest in this topic and further seeking for new treatments and to raise the discussion on body dysmorphic disorder diagnostic criteria.

Learning Objectives
At the end of this activity, the participant should be able to:
• Understand the similarities and differences between obsessive-compulsive disorder and body dysmorphic disorder.
• Explain the definition of insight and understand the repercussion of insight in a patient's life.
• Discuss level of insight with the clinical features in obsessive-compulsive disorder and body dysmorphic disorder.

Target Audience: Neurologists and psychiatrists

CME Accreditation Statement

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This activity has been peer-reviewed and approved by Eric Hollander, MD, chair at the Mount Sinai School of Medicine. Review date: March 18, 2007. Dr. Hollander does not have an affiliation with or financial interest in any organization that might pose a conflict of interest.

To Receive Credit for This Activity

Read the three CME-designated articles, reflect on the information presented, and then complete the CME quiz. To obtain credits, you should score 70% or better. Early submission of this posttest is encouraged to measure outcomes for this CME activity. The estimated time to complete all three articles and the quiz is 3 hours. Release date: April 1, 2007. Termination date: April 30, 2009.

Faculty Affiliations and Disclosures

Dr. Nakata is a resident in the Department of Psychiatry at the University of São Paulo Medical School in Brazil. Dr. Diniz is a researcher in in the PhD program in the Department of Psychiatry at the University of São Paulo Medical School. Dr. Torres is associate professor in the Department of Neurology and Psychiatry at Botucatu Medical School in Brazil. Ms. de Mathis is a postgraduate student in the Department of Psychiatry at the University of São Paulo Medical School in Brazil. Mr. Fossaluza is a master's student in the Department of Statistics at the University of São Paulo Mathematical and Statistics Institute. Dr. Bragança is associate professor in the Department of Statistics at the University of São Paulo Mathematical and Statistics Institute. Dr. Ferrão is assistant professor in the Graduate Department at Metodista University Center in Porto Alegre,

Brazil. Dr. Miguel is an associate professor in the Department of Psychiatry at the University of São Paulo Medical School.

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Please direct all correspondence to: Ana Cristina Nakata, MD, University of São Paulo Medical School, Department of Psychiatry, R Dr Ovideo Pires de Campos, 785, 4o, andar/sala 3, São Paulo, SP Brazil 05403-010; Tel: 55-11-30696972, Fax: 55-11-30696972; E-mail: ananakata@yahoo.com.br.

Abstract

Introduction: *Body dysmorphic disorder (BDD) and obsessive-compulsive disorder (OCD) have several similarities and are included among the obsessive-compulsive spectrum of disorders. However, the content of preoccupations and level of insight of BDD patients differ from OCD patients.*

Objective: *To compare the level of insight regarding obsessive-compulsive symptoms (OCS) and other clinical features in OCD patients with and without comorbid BDD.*

Methods: *We evaluated 103 OCD patients (n=25, comorbid BDD), according to* Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition *criteria using the Structured Clinical Interview for* DSM-IV*, the Yale-Brown Obsessive-Compulsive Scale, the University of São Paulo Sensory Phenomena Scale, the Beck Depression and Anxiety Inventories, and the Brown Assessment of Beliefs Scale.*

Results: *The study groups differed significantly on several clinical features, including level of insight. A worse level of insight regarding OCS was independently associated with the presence of comorbid BDD. Lower educational level, more psychiatric comorbidities, presence of somatic and hoarding obsessions, and presence of intrusive images were associated with BDD comorbidity, even after adjusting for possible confounders.*

Conclusion: *The presence of BDD in OCD patients is associated with poorer insight into obsessional beliefs and higher morbidity, reflected by lower educational levels and higher number of psychiatric comorbid disorders in general.*

Introduction

Obsessive-compulsive disorder (OCD) is a chronic condition characterized by recurrent, persistent, and distressing thoughts (obsessions) and/or rituals (compulsions).[1] The lifetime prevalence of OCD is estimated to be ~2%.[2,3]

OCD has been found to be associated with other psychiatric disorders that share some clinical similarities and genetic background.[4] These findings led to the development of the concept of obessive-compulsive spectrum disorders.[4-6] Body dysmorphic disorder (BDD),[7,8] one of the disorders included in this spectrum, is characterized by an impairing preoccupation with an imagined or slight defect in appearance.[1] This persistent preoccupation causes severe distress, poor global functioning, social withdraw, and repeated attempts to correct or camouflage the imagined or overvalued defect. Ideas of reference are common in this disorder and may lead to avoidant behaviors regarding academic, professional, or social activities.[9,10] Insight is frequently poor and may be completely impaired in some individuals.[9,11] Insight can be defined as the manner patients understand and explain their symptoms, the perception that what they do and feel is not completely normal or accepted.[12] Hence, it has an enormous influence on the patients' motivation to seek treatment.

BDD has long been noted to have similarities with OCD. Stekel[13] and Janet[14] have observed a relationship between BDD and OCD. The BDD preoccupations are similar to the OCD obsessions, which are intrusive, repetitive, distressing, and difficult to control or resist. In addition, BDD preoccupations are usually accompanied by repetitive behaviors, such as mirror-checking, request for reassurance, and skin-picking, which resemble OCD compulsions.[7] Furthermore, the features of some other BDD and OCD symptoms are similar, such as symmetry concerns, perfectionism, and avoidant behaviors. Both disorders also have similar mean age at onset, chronic course, gender ratio, and treatment response with selective serotonin reuptake inhibitors.[15,16] BDD is also a frequent comorbid condition in OCD patients.[17-19] One recent study[20] found a familial relationship between OCD, BDD, and what the authors called "grooming behaviors," such as skin-picking, nail-biting, and trichotillomania, suggesting that these disorders belong to a "familial obsessive-compulsive spectrum disorders."

However, there are important differences between BDD and OCD. The most important one is the content of the preoccupations. The BDD concerns are exclusively related to physical appearance, whereas OCD obsessions can be related to virtually any thought or idea. In addition, the BDD level of insight regarding appearance beliefs is usually poorer than in OCD with respect to obsessive fears and thoughts. Phillips and colleagues[9] reported that >50% of 100 BDD patients had completely impaired insight for a significant period of time and the majority of them also had ideas or delusions of reference differently from OCD patients.[18]

Therefore, the degree of insight is one of the most important aspects that differentiate the disorders, and it is characteristically poorer in BDD patients. Several previous studies investigated the degree of insight in a group of patients with BDD alone compared with a

group with OCD alone,[21] and groups of BDD with and without comorbid OCD,[22] OCD with and without BDD,[23] and three groups: BDD alone, OCD alone, and comorbid OCD plus BDD.[24] All these studies found that patients with BDD or BDD plus OCD had poorer insight into BDD symptoms compared with obsessive-compulsive symptoms (OCS). These previous studies have also found several additional similarities and differences between BDD and OCD in other domains, such as demographic characteristics, comorbidity with other psychiatric disorders, and types of OCS. Phillips and colleagues[24] compared subjects with OCD, BDD, and comorbid BDD/OCD and found that these groups did not differ significantly in demographic features. However, individuals with BDD were more likely than those with OCD to have lifetime major depressive disorder (MDD) and substance use disorder, and the comorbid BDD/OCD group evidenced greater morbidity than subjects with "pure" OCD or BDD in a number of domains. Differences between groups were no longer significant after controlling for BDD severity. In the comorbid BDD/OCD group, the most common obsessions focused on contamination, symmetry/exactness, and hoarding, and the most common compulsions were cleaning/washing, checking, and repeating rituals, while in the OCD group symptoms were focused mainly on contamination, pathological doubt, and the need for symmetry or exactness. Simeon and colleagues[23] found that OCD patients with comorbid BDD had more anxious, impulsive, and schizotypal features than patients with pure OCD; the mean age at onset of OCS was similar for both groups and severity correlated.

However, none of these studies examined how the presence of BDD influences insight into OCS. In other words, In other words, how poor is the level of insight regarding obsessional beliefs in OCD patients with and without comorbid BDD? In this study, we have addressed this issue and have compared the two groups in terms of demographic and clinical characteristics. Based on prior findings,[21] we hypothesized that BDD comorbidity would be associated with poorer insight about OCS, earlier age at onset of OCS, greater functional impairment, higher frequency of lifetime MDD and substance abuse disorder, more severe OCS, and higher frequency of contamination, symmetry/exactness, and hoarding symptoms.

Methods

Subjects

The sample was composed of 103 OCD patients who were divided into two groups: subjects with OCD (n=78) and subjects with comorbid BDD/OCD (n=25). For all patients, OCD was the main cause of complaint and the reason for seeking treatment. Groups were compared in relation to demographic and clinical features. From October 2004 to July 2006 all patients admitted to the OC Spectrum Disorder Project at the University Hospital of São Paulo Medical School were evaluated, comprising 99 individuals. Four other patients with comorbid OCD and BDD that had been admitted before October 2004 were included in the sample in order to increase the number of participants with BDD comorbidity. Inclusion criteria were: current OCD, as defined by *DSM-IV* criteria,[1] between 12 and 65 years of age, and a willingness to participate in the research project. Exclusion criteria were being

unable to fill out self-report questionnaires or answer the questions of structured and semi-structured interviews and diagnoses of schizophrenia, schizophreniform disorders, acute mania, or any severe neurological disorder. This project was approved by the Medical Ethics Committee of the Institute of Psychiatry at the University of São Paulo Medical School. All patients gave written informed consent. When a potiental participant was under 18 years of age, his or her parents gave the consent.

Interviewers were experienced psychologists and psychiatrists from the OC Spectrum Disorder Project of the Department of Psychiatry of the University of São Paulo Medical School that were blind to the initial study hypotheses. The interviewers' training consisted in watching interview videotapes, applying the interviews with supervision, and further discussing of doubtful aspects, and then carrying out the interviews by themselves. Each interview was reviewed by the first author (ACGN) and each diagnosis was made according to a best estimate procedure[25] given by two experienced psychiatrists (ECM and JBD) in OCD evaluation and treatment.

Clinical Assessment

Demographic characteristics and age at onset of OCS were obtained by direct interview. Age at onset of OCD was defined as the earliest age that the patient remembered having OCS.

Psychiatric disorders were assessed by the Structured Clinical Interview for the *DSM-IV*[26] plus an accessory module for impulse-control disorders not otherwise specified.[27] Current and lifetime diagnoses were included in the analyses. Subthreshold diagnoses were not included. The participants who were <16 years of age (n=4) were evaluated using the Schedule for Affective Disorder and Schizophrenia for school-age children.[28]

The presence and severity of OCS were determined with the Yale-Brown Obsessive Compulsive Scale (Y-BOCS).[29,30] Tic disorder diagnosis was verified with the Yale Global Tic Severity Scale,[31] and additional modules for tic disorder diagnosis adapted from *DSM-IV* criteria (available upon request). Severity of current depressive and anxiety symptoms were assessed with the Beck Depression (BDI)[32] and Anxiety (BAI)[33] inventories, respectively.

Current insight on the beliefs related to OCS was graded using the Brown Assessment of Beliefs Scale (BABS).[34] The scale comprises six questions (regarding conviction, perception of others' views of beliefs, explanation of differing views, fixity of ideas, attempt to disprove beliefs, insight) graded from 0–4 and an additional item that evaluates delusions and ideas of reference, also graded from 0–4.

"Sensory phenomena," which are bodily sensations or mental sensations occurring before the patient performs repetitive behaviors,[35-37] were evaluated with the University of São Paulo Sensory Phenomena Scale (available on request).

Sensory phenomena were assessed because they may reflect a dysfunction of the cortical-

striatal-thalamocortical mini-circuits, suggesting that basal ganglia may be involved with circuits that concurrently subserve a wide variety of sensorimotor, motor, oculomotor, cognitive, and limbic "processes".[38] As OCD, BDD, and tic disorders share some descriptive phenomenological aspects, such as repetitive behaviors, that are clinically observed to be preceded by cognitive or sensorimotor symptoms in some patients, such as sensory phenomena, it could help to distinguish subtypes of OCD and their association with comorbidities, such as BDD and tic disorders.

Statistical Analysis

Statistical analyses were conducted using the Statistical Package for the Social Sciences version 11.0 software and and the Language and Environment for Statistical Computing, version 2.2.1.

χ^2 test was used for the comparison of qualitative variables and Mann-Whitney for discrete quantitative variables.

Variables presenting statistically significant differences ($P<.05$) between and among groups in the univariate analysis were included in a logistic regression (stepwise method) with having or not having BDD as the response variable and in a linear regression with BABS total score as the response variable.

Results

Sample Features

Most of patients were single (n=62; 60.2%), with >12 years of formal education (n=80; 78.4%), from middle socioeconomic class (n=63; 61.8%) and with an early age at onset of OCS (n=50; 48.6%). Their mean age at the moment of interview was 33.5±13.5 (range: 10–62) years and the mean age at onset of OCS was 13.6±9.2 (range: 4–60) years.

The mean severity of OCS, as measured by the Y-BOCS was 11.9±4.0 for obsessions, 12.4±3.5 for compulsions, and 24.3±6.3 for the total score.

Almost all participants had at least one lifetime comorbid psychiatric disorder (n=99; 97.1%). The most frequent ones were unipolar mood disorder (mainly MDD) (n=73; 72.3%), social phobia (n=47; 46.5%), generalized anxiety disorder (n=41; 40.6%), and specific phobias (n=36; 35.6%). The lifetime BDD comorbidity represents 24.8% (n=25) of the sample. In this group of patients, concerns with appearance included concern with the size of breasts, belly, and thighs; hair shape; nose size and shape; hand skin appearance; and face symmetry.

Body Dysmorphic Disorder/Obsessive-Compulsive Disorder Versus Obsessive-Compulsive Disorder

The demographic and clinical differences between the study groups that were statistically significant are described in Table 1.

TABLE 1.
Significant Clinical and Demographic Differences Between OCD Patients with and Without BDD

	OCD/BDD (n=25)	OCD (N=78)	Likelihood Ratio	P*
	% (n)	%(n)		
Childhood separation anxiety disorder	50% (11)	25.4% (18)	4.5	.033
Social phobia	76% (19)	36.8% (28)	11.9	.001
Anxiety disorders excluding OCD	96% (24)	65.8% (50)	11.2	.001
Aggressive obsessions	84% (21)	51.3% (39)	9.1	.003
Contamination obsessions	72% (18)	46.1% (35)	5.2	.022
Sexual obsessions	44% (11)	22.4% (17)	4.1	.042
Hoarding obsessions	64% (16)	35.5% (27)	6.2	.013
Somatic obsessions	80% (20)	22.7% (17)	26.5	.000
Symmetry obsessions	88% (22)	53.9% (41)	10.5	.001
Miscellaneous obsessions	92% (23)	66.7% (50)	7.2	.007
Intrusive sounds	52% (13)	24% (18)	6.5	.011
Intrusive images	36% (9)	13.3% (10)	5.7	.017
Checking rituals	84% (21)	55.3% (42)	7.3	.007
Need to confess	32% (8)	12% (9)	4.8	.029
Ordering and arranging rituals	64% (16)	40.8% (31)	4.1	.043
"Just-right" perceptions (sensory phenomena type)	83.3% (20)	62.5% (45)	3.9	.049
Ideas/delusions of reference	36.3% (8)	19.4% (14)	12.3	0.015
	Mean	Mean	Mann-Whitney	P†
Education level (years)	13.06	15.68	636.5	.026
Age at onset of obsessive-compulsive symptoms	11.13	15.42	701.0	.050
Number of psychiatric comorbidities	5.75	3.81	479.0	.000
Beck Depression Inventory score	24.38	15.61	524.0	.006
Beck Anxiety Inventory score	20.75	13.79	565.0	.018

* $\chi 2$ test
† Mann Whitney non-parametric test

OCD=obsessive-compulsive disorder; BDD=body dysmorphic disorder.

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The BDD/OCD group differed from the OCD group in the following aspects: lower educational level, earlier age at onset of OCS, higher number of comorbid psychiatric disorders (including anxiety disorders, such as social phobia and childhood separation anxiety disorder), higher frequency of obsessions (such as contamination, aggressive, sexual, hoarding, somatic, symmetry and miscellaneous obsessions, and intrusive sounds and images), compulsions (such as checking, ordering, and arranging compulsions), ideas of reference, and specific modalities of sensory phenomena (just-right perceptions). This group also scored higher on the BDI and BAI. Regarding the scores in the Y-BOCS, there was no significant difference between groups (mean Y-BOCS total score: 24.04 for the OCD group and 25.08 for the BDD/OCD group).

Linear regression analysis results are described in Table 2. Higher mean BABS total score (as the dependent variable) was independently associated with presence of comorbid BDD, contamination fears, checking compulsions, and need to confess. On the other hand, comorbidity with other anxiety disorders, presence of sexual, hoarding and miscellaneous obsessions, and more severe depression (as measured by the BDI) were associated with a

better insight, or a lower mean BABS score.

TABLE 2.
Linear Regression Analysis (BABS Total Score as the Response Variable)

	Coefficient (SE)	P	Odds Ratio	95% CI
BDD	3.8 (1.2)	.002	44.70	(4.25-469.65)
Any anxiety disorder excluding OCD	−2.7 (0.9)	.002	0.07	(0.01-0.39)
Contamination obsessions	1.6 (0.6)	.013	4.95	(1.53-16.05)
Sexual obsessions	−2.5 (0.6)	<.001	0.08	(0.02-0.27)
Hoarding obsessions	−1.6 (0.8)	.043	0.20	(0.04-0.97)
Miscellaneous obsessions	−3.2 (1.3)	.015	0.04	(0.003-0.52)
Checking rituals	2.2 (0.8)	.008	9.02	(1.89-43.29)
Need to confess	1.8 (0.8)	.030	6.05	(1.26-29.02)
Beck Depression Inventory score	−0.1 (0.04)	.026	0.90	(0.84-0.98)

BABS=Brown Assessment of Beliefs Scale; BDD=body dysmorphic disorder; OCD=obsessive-compulsive disorder; SE=standard error.

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Logistic regression analysis results are described in Table 3. Comorbidity with BDD (as the dependent variable) was independently associated with lower educational level, higher number of psychiatric comorbid disorders, and a higher frequency of hoarding, somatic obsessions, and intrusive images.

TABLE 3.
Logistic Regression Analysis (Having or not Having BDD as the Response Variable)

	Coefficient (SE)	P	Odds Ratio	95% CI
Educational level (years)	−0.3 (0.1)	.006	0.74	(0.61-0.90)
Number of psychiatric comorbidities excluding OCD	0.5 (0.2)	.042	1.65	(1.12-2.44)
Hoarding obsessions	2.1 (0.9)	.026	8.17	(1.40-47.65)
Intrusive images	4.1 (2.0)	.042	60.34	(1.20-3,041.18)
Somatic obsessions	3.5 (1.1)	<.001	33.12	(3.83-286.00)

BDD=body dysmorphic disorder; OCD=obsessive-compulsive disorder; SE=standard error.

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Discussion

The objective of this study was to investigate the interference of BDD symptoms on OCD clinical expression in patients with both disorders.

Our main hypothesis was confirmed. A worse level of insight into OCS (ie, higher total BABS score focused on obsession beliefs) was independently associated with BDD comorbidity, according to the logistic regression. After adjusting for possible confounders, the presence of BDD in these OCD patients remained associated with lower educational level, higher number of psychiatric comorbid disorders, and specific OCS, such as hoarding and somatic obsessions, and intrusive images.

The observation of poorer insight regarding the beliefs underlying OCD obsessions in patients with comorbid BDD/OCD parallels the previous observations of worse insight associated to appearance beliefs underlying BDD worries.[21–24] One possible interpretation for this finding is that common underlying pathophysiologic mechanisms could contribute

for the final phenotypic expression concerning the degree of insight in these two disorders. If true, this finding would represent an additional evidence for the notion that OCD and BDD are part of a spectrum of clinical manifestations with possible common neurobiological and genetic backgrounds.

The univariate analyses of demographic and clinical variables, including comorbid psychiatric conditions, revealed that BDD comorbidity was associated with earlier age at onset of OCS, lower educational level, higher number of comorbid anxiety disorders, and more severe depression, anxiety, and OCS. However, only lower educational level and higher number of psychiatric comorbid disorders remained significantly associated with BDD comorbidity after the logistic regression.

The lower educational achievements of BDD plus OCD patients, also observed in a previous study,[39] may reflect the negative impact of BDD comorbidity in OCD patients, leading to increased distress and interference with academic functioning. Furthermore, the comorbid anxiety disorders (separation anxiety and social phobia), which were more frequent in this subgroup in the univariate analysis, may also play a role leading to additional avoidant behaviors and lower academic achievements in these patients.

Participants with comorbid BDD/OCD in our sample also had a higher number of comorbid psychiatric disorders. One possible explanation for this finding is that comorbid BDD/OCD patients have higher vulnerability for the development of several psychiatric disorders. Interestingly, a study that compared BDD patients with a comorbid BDD/OCD group[22] showed that OCD comorbidity had an additional negative impact on BDD, while another study[24] found that most differences between BDD and comorbid BDD/OCD patients disappeared when severity of BDD was taken into account. In this last study,[24] however, differences reported between the OCD and the comorbid BDD/OCD groups remained significant after controlling for OCD severity. Therefore, it is possible that the comorbidity of OCD and BDD acts in both directions, contributing for the general impact of psychopathology in the patients' lives.

Social phobia and childhood separation anxiety were the only psychiatric disorders that were more frequent among patients with comorbid BDD/OCD. The higher frequency of comorbid social phobia in the BDD/OCD group could reflect a true differential comorbid pattern or, alternatively, an artificially inflated prevalence. Considering the clinical overlap between symptoms of BDD and social phobia, our current diagnostic criteria are not always able to tease out symptoms that are common to both disorders, such as avoidance of social situations, worries about being scrutinized by others, feeling ashamed, and fearful of embarrassment or rejection, which happen for different reasons, or cognitive dysfunctional appraisals in these disorders.[24] In fact, BDD is conceptualized in Eastern cultures as a form of social phobia.[40]

The higher frequency of separation anxiety disorder in our patients needs further replication. Since the investigation of this condition is not included in most of the semi-structured interviews for adults, this disorder may have not been properly inspected in previous studies.

Regarding the content of the OCS, patients with comorbid BDD/OCD showed a higher frequency of hoarding and somatic obsessions, and intrusive images. Hoarding obsessions and compulsions were also among the most common OCS in the comorbid BDD/OCD group in the study of Phillips and colleagues.[24] Hoarding has been consistently considered as a unique dimension of OCS.[41,42] In a recent cluster analysis using Y-BOCS categories, Hasler and colleagues[43] found that the hoarding cluster was not combined with the other clusters until the later steps of analyses, suggesting a fairly distinct symptom category. Moreover, similar to what was described above, several specific features have been pointed in hoarders: higher anxiety and depression, poorer insight, and more severe psychosocial impairment.[44,45] Therefore, further studies should investigate whether the association of hoarding and BDD reflects common abnormalities in neurobiological substrates and genetic vulnerability.

In line with our results, other authors[46] have described an association between somatic obsessions and BDD. In fact, a close psychopathological relationship between BDD and somatic obsessions is likely to exist, such as the focus of concern in body perception and appearance, and the intrusive and negative character of repetitive thoughts. Hoehn-Saric and Barksdale[47] found that somatic symptoms were more frequent in OCD patients with a history of poor impulse control compared with those without it.

Intrusive images, which content was not investigated in our study, were also more frequent in the comorbid BDD/OCD group and could be related to esthetical preoccupations, which have a predominant visual quality as well as the arranging rituals, in the same way that ideas of reference normally are.

A specific instrument was used in this study to evaluate subjective experiences associated to OCS, such as the presence of sensory phenomena. Sensory phenomena consist of mental or bodily sensations preceding repetitive behaviors in the absence of any thought, fear, or worry, which were first described in Tourette syndrome patients.[35-38] Energy release, "just right" perceptions and other mental sensations, such as incompleteness, are types of sensory phenomena that have been reported in previous studies[36,37,48] as being more frequent in OCD patients with comorbid Tourette syndrome. In this study, "just right" perceptions were associated with BDD comorbidity in the univariate analysis. This type of subjective experiences are usually present in obsessive-compulsive spectrum disorders with a poorer cognitive component, such as tic disorders, which is not the case of BDD that, in fact, has complex cognitive aspects, and probably more compulsive (voluntary) than tic-like (automatic) behaviors. However, one study comparing OCD patients with and without tic disorders,[19] found a higher frequency of BDD in the tic-related OCD, suggesting a relationship between these disorders. Sensory phenomena could be associated with some of the "grooming behaviors" or symmetry/arranging rituals regarding body parts in BDD, a hypothesis that needs to be investigated.

Limitations of this study include the relatively small sample of comorbid BDD patients, which might have lowered the study power to find some of the hypothesized differences. All patients had at least subclinical symptoms of BDD at current time. Some patients had clinical BDD as defined by *DSM-IV* criteria in the past but did not present full criteria during the time of evaluation. It was not possible to verify the impact of fulfilling criteria

for clinical past but not current diagnosis. In addition, these patients searched for medical assistance in a university service and most were receiving treatment. Therefore, our findings cannot be generalized to primary or secondary clinical settings and to community samples. Furthermore, due to the retrospective nature of the assessments, some of the information may have suffered from recall bias. Due to exploratory characteristics of this study, no previous power calculation was preformed. We also ran multiple tests of significance, raising the possibility of type 1 error. Finally, no inferences about direction of causality can be made due to the study design. It is also important to highlight that this study was focused on the BDD impact on OCD when both disorders are present. Therefore, no inferences regarding a BDD diagnosis alone could be made.

Conclusion

Our findings provide further support to the idea that there are more similarities than differences between OCD and BDD.[24] The low level insight of OCD beliefs in the comorbid BDD/OCD group resembled the reported poorer insight regarding appearance beliefs typical of BDD, suggesting that common etiological mechanisms can contribute for the final manner patients understand and explain their suffering. In addition, this study replicates previous observations that the presence of BDD in OCD patients is associated with higher morbidity, reflected in the lower educational levels, and higher number of psychiatric comorbid disorders in general. These results should call attention of clinicians to investigate, diagnose, and treat carefully both disorders when facing these patients.

Finally, specific OCS may be associated to the BDD comorbidity, such as hoarding and somatic obsessions, raising heuristic hypothesis for future studies regarding which subtype of OCD may be related to BDD.

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