



## Family Accommodation in the Different Dimensions of the Symptoms of Obsessive-Compulsive Disorder

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### Abstract

**Aim:** To evaluate the association between family accommodation and the different obsessive compulsive disorder (OCD) symptom dimensions.

**Method:** This was a cross-sectional study with patients and their family members diagnosed with OCD at a research clinic. The instruments used in this study were: the Mini International Neuropsychiatric Interview (MINI PLUS), the Yale-Brown Obsessive Compulsive Scale (Y-BOCS), the Dimensional Yale-Brown Obsessive-Compulsive Scale (DY-BOCS) and the Family Accommodation Scale for Obsessive-Compulsive Disorder - Interviewer-Rated (FAS-IR).

**Results:** The study sample included 95 patients and 160 family members. The factors associated with family accommodation were: age of the patient ( $\beta = -0.145$ ) (95% CI: -0.27; -0.02), family member living with the patient ( $\beta = 3.185$ ) (95% CI: 0.13; 6.24), the family member who was a partner/boyfriend/girlfriend of the patient ( $\beta = 5.750$ ) (95% CI: 2.40; 9.10) and patients with OCD symptoms of sexual/religious dimension ( $\beta = 0.483$ ) (95% IC: 0.14; 0.83).

**Conclusion:** OCD *sexual/religious symptom dimensions* have a *complex clinical presentation*, especially when it involves a partner. The discussion of these findings is of paramount importance be used as an essential tool for developing treatment interventions. A better understanding of OCD, identified in a systematic way, could help minimize the impact of obsessive compulsive symptoms on the nuclear family.

### Keywords

Obsessive-Compulsive disorder, Families, Family accommodation, Sexual/Religious symptoms

(2006) for use in Brazil [1-3]. The dimensions are classified with the following contents: 1) aggression; 2) sexual, religious obsessions; 3) symmetry, order and arrangement; 4) contamination and cleaning; 5) hoarding, and 6) miscellaneous.

These symptoms interfere with the daily life activities, such as eating, bathing, or being in public, in ways that are often disturbing and distracting for patients and family members [4]. Therefore, the impact of OCD symptoms extends beyond the patient, as the family reactions may directly affect the course of the disease [5,6]. When family members make changes to their routines due to the patient's symptoms, this ends up giving rise to the concept of Family Accommodation (FA) [4]. This term describes changes that individuals (e.g. parents, partners, siblings, and children) make to their own behavior to prevent or decrease the patient's suffering related to OCD symptoms or to reduce the time spent in performing the rituals [7]. Accommodation to OCD behavior by family members includes providing reassurance of their behavioral rituals [8-12].

Other characteristics of the relatives of patients with OCD have been studied in order to determine the predictable factors for greater accommodation and thus influence the treatment of the disorder, such as the mental disorders of the family member (mainly OCD), the degree of kinship with the patient, the occupation, the dysfunctional environment, among others. Although some studies have shown some of these associations, they have to be clarified and further investigated with the use of other samples [4,7,13-15].

According to the literature, the prevalence of FA is considered high and ranges from 80% to 95% [7,8,10,12,16]. Regarding the association between different types of OCD symptoms and FA levels, two studies, using the DY-BOCS, were not able to find any association between the severity of the different OCD dimensions and the FA levels [12,17]. These studies have justified this lack of association due to the sample size, since some dimensions had  $p$  value close to 0.05, requiring further investigation with different samples. Therefore, it is known that high levels of FA are commonly associated with severity of obsessive-compulsive symptoms and may cause functional impairment. However, the influence of different

### Introduction

Obsessive compulsive disorder (OCD) is considered a heterogeneous condition, which can be divided into different dimensions according to the Dimensional Yale-Brown Obsessive-Compulsive Scale (DY-BOCS). The Portuguese-language version of this instrument was adapted and validated by Rosario-Fields et al.,

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types of symptoms presented by the patients and their severity are not well known. Therefore, the aim of this study was to evaluate the association between family accommodation and the different OCD symptom dimensions.

## Methods

### Design

It is a cross-sectional study nested in a major intervention study.

### Sample

Participants were recruited via media, posters, population-based studies, and referrals from other health services of the city, from June 2012 to July 2015. The selected individuals were evaluated at the Clinic of Research and Extension in Mental Health of the Catholic University of Pelotas in order to receive treatment for the disorder.

The inclusion criteria were determined as follows: age range 18 to 60 years, OCD diagnosis at the time of evaluation and designation of at least one family member to be interviewed (two were requested). The following items were used as exclusion criteria: abuse or addiction to alcohol and/or illicit substances; severe psychotic symptoms at the time of evaluation; moderate or severe risk of suicide; cognitive and/or physical limitations to participate in the study. Family members appointed by the patient had to be 18 years or older and living with the patient. The individuals who were part of the family environment, a friend or a boyfriend/girlfriend, were also considered as family members.

### Procedure

After passing through a diagnostic evaluation performed by trained psychologists, the patients diagnosed with OCD were referred for treatment. In the first evaluation, all patients received information about this study and were asked to indicate two family members to be interviewed at home. Data were collected from all patients. The interview with the family members was performed by undergraduate psychology students.

### Variables and instruments

This study included socio-demographic and clinical features of both patients and their family members: age and socioeconomic class (A + B high/middle class; C lower middle class; D + E low class, according to the Brazilian Association of Research Companies) [18]. The following variables were investigated only for family members: marital status; occupation; degree of kinship with the patient (mother/father/brother/sister/uncle/aunt/friend or partner/boyfriend/girlfriend); living with the patient, and if they were *undergoing* or *have undergone* psychological or psychiatric treatment. Gender and the number of chronic diseases (spinal disease, arthritis or rheumatism, cancer, diabetes, bronchitis or asthma, hypertension, heart disease, chronic renal failure, tuberculosis, tendonitis, sinusitis, cirrhosis, others) were also investigated.

The diagnosis of Major Depressive Episode, Suicide Risk (for patients only) and OCD for family members and patients was conducted through the Mini International Neuropsychiatric Interview (MINI PLUS), which is a semi-structured diagnostic interview based on DSM-IV and ICD-10 criteria. The interview is divided into modules, each one corresponds to a diagnosis to be explored. Three modules were used in the present study: A (Major Depressive Episode), C (Suicide Risk) and I (OCD), respectively. The results concerning the reliability and validity of MINI modules are broadly satisfactory [19].

The Yale-Brown Obsessive Compulsive Scale (Y-BOCS) was used to assess the severity of obsessive and compulsive symptoms. This scale quantifies the severity of OCD symptoms experienced in the last week. Five items measure obsessions (concern, anguish, interference, resistance and control) and five items measure compulsions (time, anguish, interference, resistance and control). These items were rated on a 0 to 4 scale, giving rise to a total severity score ranging from 0 to

40 (5 items for obsessions and 5 items for compulsions), where higher scores represent greater severity. The Y-BOCS presents excellent internal consistency for each item ( $\alpha > 0.88$ ) [20].

The severity of the different OCD symptom dimensions was measured by the Dimensional Yale-Brown Obsessive-Compulsive Scale (DY-BOCS) and divided into six dimensions with the following contents: 1) aggression; 2) sexual/religious; 3) symmetry, order and arrangement; 4) contamination and cleaning; 5) hoarding; and 6) miscellaneous. The characteristics evaluated for each dimension were: time spent, discomfort and disability caused by that dimension, ranging from 0 to 5 in each question. The clinical evaluation score of the damage extent was calculated by the interviewer and ranged from 0 to 15. It shows excellent internal consistency for each dimension (Cronbach's alphas were 0.94 for aggression; 0.95 for sexual/religious; 0.95 for symmetry, order and arrangement; 0.96 for contamination and cleaning; 0.95 for hoarding and 0.94 for miscellaneous) [3].

The mean values and the prevalence rates of FA were obtained using the Family Accommodation Scale for Obsessive-Compulsive Disorder - Interviewer Rated (FAS-IR) validated in Brazil by Gomes et al. (2011) [12]. The scale assesses the degree of relative's involvement in the patient's obsessive-compulsive symptomatology. It is divided into two stages: the assessment of the types of symptoms of the patient followed by the evaluation of the FA. The scale consists of 12 questions that examine, among other things, reassurance provided by the family members, participation in the patient's rituals, and modification of daily routine. These behaviors are assessed on a 5 - point scale that measures the degree of family involvement - 0 (no/not at all) to 4 (every day/extreme). The scores of each item are summed to provide a total score of accommodation ranging from 0 to 48. This score is then used to calculate the FA mean values. The overall prevalence of FA was found considering 1 or more points to accommodate to the symptom. The same cutoff point was used to determine the presence of each accommodation behavior. The maximum score of 4 points was used to determine the daily/extreme prevalence in at least one FA behavior [7]. It features satisfactory internal consistency ( $\alpha = 0.80$ ).

### Ethical aspects

This study was approved by the Ethics Committee of the Catholic University of Pelotas under the protocol number 249.564. All participants (patients and families members) signed an informed consent. Those with any diagnosis, except OCD, or those who were excluded from the major study due to any other pathology were referred to the National Health Service, closer to their homes.

### Processing and data analysis

Data processing was carried out in different ways regarding the patients and family members. Patients' data were digitized directly into tablets equipped with OpenData Kit (ODK) software. The questionnaire data of the family members were coded and double entered using *Epi Data Entry software* for better data consistency.

Data analysis was performed using SPSS 21.0. For the univariate analysis, the absolute frequencies and prevalence, as well as mean and standard deviation, were used for the each sample characteristic and for the scores of the FAS-IR items. The Kolmogorov-Smirnov test was used to determine the normality of the continuous distribution of variables. For the bivariate analysis, the Student's t-test was used to compare the FA means. The Spearman correlation test was used to measure the degree of relationship between the FA and other continuous variables. Those variables that presented a value of  $p \leq 0.20$  in the bivariate analysis were submitted to the adjusted analysis, except 'impairment clinical evaluation' due to its collinearity with sexual/religious and miscellaneous dimensions. Linear regression was performed and the variables were adjusted for patient age; number of chronic diseases of the patient; age of the family member; family members who live with the patient; degree of kinship; sexual/religious dimension; miscellaneous dimension and severity of obsessive compulsive symptoms (Y-BOCS).

**Table 1:** Sociodemographic and clinical characteristics of patients diagnosed with obsessive compulsive disorder and the association with family accommodation according to FAS-IR<sup>a</sup>.

Variables	Patient characteristics N (%)	Family accommodation (FAS-IR <sup>a</sup> ) Mean (SD)	p-value
<b>Sex (N = 159)</b>			0.937
Male	43 (27.0)	8.4 (10.1)	
Female	116 (73.0)	8.3 (9.6)	
<b>Socioeconomic status</b>			0.446
A+B	76 (47.5)	8.9 (10.1)	
C	79 (49.4)	8.6 (9.5)	
D+E	05 (3.1)	11.8 (6.2)	
<b>Major depressive episode (N = 156)</b>			0.450
No	105 (67.3)	8.8 (10.3)	
Yes	51 (32.7)	7.6 (8.6)	
<b>Suicide risk (N = 150)</b>			0.434
No	109 (72.7)	8.9 (10.5)	
Yes	41 (27.3)	7.5 (8.1)	
<b>Total</b>	<b>160 (100.0)</b>	<b>8.4 (9.7)</b>	--

<sup>a</sup>Family Accommodation Scale for Obsessive-Compulsive Disorder -Interviewer-Rated

**Table 2:** Sociodemographic and clinical characteristics of patients diagnosed with obsessive compulsive disorder and the correlation with family accommodation according to FAS-IR<sup>a</sup>.

Variables	Patient characteristics Mean (SD)	Spearman Correlation <i>r</i>	p-value
<b>Age (N = 138)</b>	35.8 (11.9)	-0.161	0.059
<b>Number of chronic diseases</b>	1.07 (1.3)	-0.157	0.047*
<b>Aggression (DY-BOCS<sup>b</sup>)</b>	5.1 (4.9)	0.049	0.541
<b>Sexual/religious (DY-BOCS<sup>b</sup>)</b>	2.8 (4.1)	0.206	0.009*
<b>Symmetry (DY-BOCS<sup>b</sup>)</b>	7.2 (4.1)	0.011	0.890
<b>Contamination (DY-BOCS<sup>b</sup>)</b>	6.2 (5.2)	0.096	0.225
<b>Hoarding (DY-BOCS<sup>b</sup>)</b>	2.7 (3.3)	0.074	0.354
<b>Miscellaneous (DY-BOCS<sup>b</sup>)</b>	5.2 (4.7)	0.218	0.006*
<b>Impairment clinical evaluation (DY-BOCS<sup>b</sup>)</b>	7.6 (4.5)	0.241	0.002*
<b>Obsessive compulsive symptoms (Y-BOCS<sup>c</sup>)</b>	24.2 (8.1)	0.234	0.010*

\*Variable with statistical significance; <sup>a</sup>Family Accommodation Scale for Obsessive-Compulsive Disorder -Interviewer-Rated; <sup>b</sup>Dimensional Yale-Brown Obsessive-Compulsive Scale; <sup>c</sup>Yale Brown Obsessive-Compulsive Scale

## Results

The study sample consisted of 95 patients. Among these patients, 67 have indicated two (2) family members and 28 indicated only one (1). Two family members refused to participate in the study. Therefore, the final sample totaled 160 family members.

Table 1 shows socio-demographic and clinical characteristics of patients diagnosed with OCD and the association with FA. The prevalence rate of FA was 71.3% (N = 114), with an average of 8.4 points (SD ± 9.7). For the socio-demographic characteristics of the patients, the mean age was 35.8 years old (SD ± 11.9), mostly were women (73.0%) who belonged to class C (49.4%). The mean of chronic disease was 1.07 (SD ± 1.3), prevalence of suicide risk was 27.3% and depression was 32.7%. The highest scores for the OCD symptom dimensions were symmetry, 7.2 (SD ± 4.1), and contamination, 6.2 (SD ± 5.2). In addition, the highest score for impairment clinical evaluation was 7.6 (SD ± 4.5) and for the obsessive-compulsive symptoms, 24.2 (SD ± 8.1).

Table 2 shows a correlation between the age of the patients and FA ( $r = -0.161$ ), and also between the number of chronic diseases of the patients and FA ( $r = -0.157$ ), indicating the younger the patient and with less chronic diseases, the higher the level of FA. For the OCD symptom dimensions, only the sexual/religious ( $r = 0.206$ ) and miscellaneous ( $r = 0.218$ ) dimensions showed a significant correlation ( $p < 0.005$ ). With regard to these dimensions, it can be concluded that the greater the severity of symptoms, the higher the level of FA. The same is true for the impairment clinical evaluation assessed by DY-BOCS ( $r = 0.241$ ) and for the obsessive compulsive symptoms measured by Y-BOCS ( $r = 0.234$ ).

Table 3 shows the socio-demographic and clinical characteristics of the family members of patients diagnosed with OCD and their association with family accommodation, according to FAS-IR.

Regarding the characteristics of family members, the mean age was 43.0 years (SD ± 6.2), most people belonged to class A + B (48.2%), were married or living with a partner (46.3%) and worked (60.4%). In relation to kinship degree, the prevalence of family members who were partners/boyfriends/girlfriends was 30.6%, and the prevalence of family members who did not live with the patients was 51.3%. For clinical/mental health characteristics of the family members, there was a prevalence of 36.3% of relatives who were undergoing or had undergone a psychological or psychiatric treatment at least once in life, 28.9% were diagnosed with depression and 6.3% with OCD.

In the bivariate analysis, significant differences were found for the variables "Relationship to the patient" and "family member living with the patient". The highest means of FA, 12.7 (SD ± 11.7), were found for the "family whose member was a partner/ boyfriend/ girlfriend" ( $p = 0.001$ ), and for the "family whose member lived with the patient", 9.9 (SD ± 11.1), ( $p = 0.048$ ).

Table 4 shows the scores of the 12 FAS-IR items. The most common forms of FA observed in the study sample were: providing reassurance (53.8%) and watching the rituals (45.0%). The least common were: facilitating avoidances (15.6%) and facilitating the compulsions (20.0%). In relation to the higher prevalence of daily/ extreme occurrences of FAS-IR items, the following stood out: reassurance (15.6%) and watching the rituals (18.8%). Those with lower prevalence were: tolerating OCD behaviors (0.6%), assuming patient's responsibilities (0.6%) and modifying their personal routine (0.6%).

Finally, table 5 presents the linear regression analysis for factors associated with FA: patient age ( $\beta = -0.145$ ) (95% CI: -0.27; -0.02), family member who lives with the patient ( $\beta = 3.185$ ) (95% CI: 0.13; 6.24), the degree of family kinship ( $\beta = 5.750$ ) (95% CI: 2.40; 9.10) and sexual/religious dimension of the OCD symptoms ( $\beta = 0.483$ ) (95% CI: 0.14; 0.83). The results showed higher degrees of FA for

**Table 3:** Socio-demographic and clinical characteristics of family members of patients diagnosed with obsessive compulsive disorder and the association with family accommodation according to FAS-IR<sup>a</sup>.

Variables	Family member characteristics N (%)	Family accommodation (FAS-IR <sup>a</sup> ) Mean (SD)	p-value
<b>Socioeconomic status (N = 137)</b>			0.707
A+B	66 (48.2)	7.8 (9.4)	
C	65 (47.4)	10.1 (10.7)	
D+E	06 (4.4)	3.2 (7.3)	
<b>Marital status</b>			0.203
Single	48 (30.0)	8.4 (9.9)	
Married / living with a partner	74 (46.3)	9.2 (10.2)	
Separated or divorced	21 (13.1)	9.1 (9.6)	
Widow /widower	17 (10.6)	3.7 (5.3)	
<b>Work (N = 159)</b>			0.710
No	63 (39.6)	8.0 (8.7)	
Yes	96 (60.4)	8.6 (10.4)	
<b>Relationship to the patient</b>			0.001*
Mother/ Father/ Sibling/Uncle/ Aunt/ Friend	111 (69.4)	6.4 (8.0)	
Partner / boyfriend / girlfriend	49 (30.6)	12.7 (11.7)	
<b>Live with the patient</b>			0.048*
No	82 (51.3)	6.9 (7.9)	
Yes	78 (48.8)	9.9 (11.1)	
<b>Psychological or psychiatric treatment</b>			0.653
Never underwent	102 (63.8)	8.6 (9.4)	
Has already undergone, /is currently undergoing	58 (36.3)	7.9 (10.2)	
<b>Major depressive episode (N = 159)</b>			0.439
No	113 (71.1)	7.9 (9.1)	
Yes	46 (28.9)	9.2 (11.1)	
<b>Obsessive Compulsive Disorder (N = 158)</b>			0.597
No	148 (93.7)	8.2 (9.7)	
Yes	10 (6.3)	9.9 (10.2)	
<b>Total</b>	<b>160 (100.0)</b>	<b>8.4 (9.7)</b>	--
<b>Variables</b>	<b>Family members characteristics Mean (SD)</b>	<b>Spearman Correlation r</b>	<b>p-value</b>
<b>Age (years)</b>	43.0 (6.2)	-0.125	0.117
<b>Total</b>	--	<b>8.4 (9.7)</b>	--

\*Variable with statistical significance; <sup>a</sup>Family Accommodation Scale for Obsessive-Compulsive Disorder-Interviewer-Rated

**Table 4:** Prevalence of daily/extreme accommodation according to the scores obtained on the Family Accommodation Scale (FAS-IR<sup>a</sup>).

Items	Prevalence <sup>b</sup> N (%)	Daily/extreme prevalence N (%)
Providing reassurance	86 (53.8)	25 (15.6)
Watching the rituals	72 (45.0)	30 (18.8)
Waiting for the patient	43 (26.9)	19 (11.9)
Containing up to say or do things	55 (34.4)	14 (8.8)
Participating in the compulsions	48 (30.0)	17 (10.6)
Facilitating compulsions	32 (20.0)	08 (5.0)
Facilitating avoidances	25 (15.6)	07 (4.4)
Tolerating OCD <sup>c</sup> behaviors	60 (37.5)	01 (0.6)
Helping with activities	50 (31.3)	13 (8.1)
Assuming patient's responsibilities	40 (25.0)	01 (0.6)
Modifying personal routine	47 (29.4)	01 (0.6)
Modifying family routine	38 (23.8)	02 (1.3)

<sup>a</sup>Family Accommodation Scale for Obsessive-Compulsive Disorder-Interviewer-Rated; <sup>b</sup>Considering the presence of the item if person has scored at least 1 point; <sup>c</sup>Obsessive Compulsive Disorder

those family members of younger patients, who lived in the same house, partners/boyfriends/girlfriends, as well as for family members of patients with sexual/religious dimension.

## Discussion

This study evaluated the association between FA and the different OCD symptom dimensions. The prevalence of FA was 71.3% (N = 114), lower than that we found in the literature, which has reported the following prevalence rates: 88.2% [8], 89.0% [7], 90.0% [16] and 96.9% [10]. This can be explained by the exclusion criteria determined in the study sample: moderate or severe suicide risk, indicating that these patients exhibited less psychological distress, since the more severe the symptoms, the greater the FA. In addition, half of the family did not live with the patient, while other studies evaluated specifically primary caretakers [6,7,16].

**Table 5:** Multivariate linear regression analysis for factors associated with family accommodation.

Variables	$\beta$	95% CI	p-value
Patient age <sup>a</sup>	-0.145	-0.27; -0.02	0.027*
Number of patient's chronic diseases <sup>a</sup>	-0.418	-1.93; 1.09	0.584
Family member age <sup>a</sup>	-0.055	-0.15; 0.04	0.265
Family member who lives with the patient <sup>a</sup>	3.185	0.13; 6.24	0.041*
Degree of kinship <sup>b</sup>	5.750	2.40; 9.10	0.001*
Sexual/religious dimension (DY-BOCS) <sup>b</sup>	0.483	0.14; 0.83	0.006.
Miscellaneous dimension (DY-BOCS) <sup>b</sup>	0.083	-0.26; 0.43	0.632
Obsessive compulsive symptoms (Y-BOCS) <sup>c</sup>	0.110	-0.10; 0.33	0.312

\*Variable with statistical significance. <sup>a</sup>Variables adjusted for patient age; number of patient's chronic diseases; family member age; family member who lives with the patient; <sup>b</sup>Variables adjusted for patient age; family member who lives with the patient, degree of kinship; sexual/religious dimension; miscellaneous dimension; <sup>c</sup>Variables adjusted for patient age; family member who lives with the patient; degree of kinship

In literature, the FA behavior most frequent is providing reassurance, and we found the same in this study. But in the other hand, the second FA behavior most frequent found in the literature is no consensus while in our study was watching the rituals [8-12]. The same behaviors also had higher prevalence of daily/extreme occurrence. To provide reassurance is to try to calm down the patient, reaffirming that he/she has nothing to worry about, there is no reason for concerns or that the repetitive rituals solved his/her concerns (e.g. say that the patient is not infected, or that something is already clean enough). This behavior reassures the OCD patient who suffers from doubts and indecision; the need for reassurance becomes stronger, and consequently, the family involvement in their rituals is increased [12,21].

Distinctively, in our investigation, special attention was given to sexual/religious dimension, which that was strongly associated with FA. It is noteworthy that some variables that remained significantly associated even after adjusted analysis were those related to family

context (family members who lived in the same house, partners/boyfriends/girlfriends, as well as for family members of patients with sexual/religious dimension).

In this context, our findings demonstrated that some family members, who were partners/boyfriends/girlfriends of the patients, presented higher level of FA. This may be explained by the fact that family members with this degree of kinship have greater intimacy and this could cause the intense suffering in married life. Similarly, family members, who were living with the patient, also presented higher level of FA. According to Neto (2011), the daily contact with OCD patient results in greater contact with the symptoms, suggesting a greater probability of accommodation. The authors have suggested that a higher degree of burden of the family members could be the result of a greater level of FA, resulting in higher functional impairment in individuals with OCD [22]. According to Cooper et al. (1996), living with people who have OCD and the lack of social activities with other family members, due to higher degree of accommodation, generate feelings of frustration, anger and guilt [21].

Considering the sexual/religious dimension and the levels of FA, most studies, which somehow investigated the specific symptoms of OCD and FA or the relationship with the family, presented many different results. For example, association with aggressive content, cleaning rituals, checking rituals, symptoms of contamination and washing [11,17,23].

Although the sexual/religious symptom dimensions have only been reported by a few patients, because of their embarrassing or blasphemous content, they became evident in the relationship with the partner. According to Moulding (2014), these symptoms are considered as “repugnant obsessions”, “taboo thoughts” or “unacceptable thoughts” and are usually associated with covert activities that serve to neutralize the thoughts, but they can also be accompanied by compulsive acts. For example, a person afraid of being a pedophile can compulsively check their body reactions in the presence of children; a person afraid of having forbidden thoughts can hit the head to get rid of them; a person can repeat actions until they are accompanied by good thoughts. These examples demonstrate that the partner may notice the interference of symptoms in the relationship and adjust to them, even without understanding the content of the obsession [24].

Although a few studies are currently investigating this particular OCD symptom dimension, previous studies have showed that about 20-30% of people diagnosed with OCD have reported sexual and/or religious obsessions as their main problem [25,26]. Further studies should investigate the clinical aspects of this condition and develop new treatments that will include the patient's partner.

In summary, we can think about the intersection of living with the patient, being a partner of the patient and presenting sexual/religious symptom dimensions in combination with family accommodation. However, the fact that a younger age group is also associated with family accommodation is not easily understood in that context.

Regarding the age of the patient and FA, Sukhodolsky (2005), in a survey of parents of children with OCD, found greater flexibility in the rules and in family decision-making, which may be an indication that parents of children with OCD learn to use adaptive parenting strategies that accommodate their children's symptoms [27]. Even though the sample of this study did not include children, our findings may be related to the fact that relatives of younger patients perceived them as those in need of great care from a family member, who can understand the accommodation behavior as a way to express affection, attention and protection. However, these findings differ from some studies that have found that FA occurs regardless of age, sex or degree of kinship [7,11]. Therefore, further research should investigate the socio-demographic characteristics of both patient and family members involved in the FA process to fill gaps between this associations.

Certain limitations of the study have to be considered in interpreting the findings. First, the cross-sectional nature of the

study and the inherent limitations in the inability to establish a line of causality; however, this was not the goal, nor the intention of the present study. Second, the absence of the second family member of some patients. Third, there was no criterion for determining the time of living with the patient. And finally, all close family members were included in the study.

Although the sample size did not allow us to investigate the relationship between other OCD symptom dimensions and different degrees of kinship - especially father and mother - our sample can be considered significant compared to other studies as it enabled us to find an association between the relationship with the partner and sexual/religious dimension of the patient.

A careful diagnostic evaluation was carried by trained and qualified professionals, which provides evidence of high reliability in the diagnosis of OCD. There was also an investigation of the mental disorders regarding the family member, as well as other patient features associated with FA that were poorly evaluated in previous studies.

Based on the results obtained, it can be concluded that the discussion of these findings has great clinical significance. A better understanding of mental disorders, particularly OCD, identified in a systematic way, is of paramount importance to help minimize the impact of obsessive compulsive symptoms on the nuclear family. Knowing exactly which OCD symptom dimensions are associated with family accommodation will be an essential tool for developing and implementing treatment interventions.

## References

1. Washington DC (2013) Diagnostic and statistical manual of mental disorders, (5<sup>th</sup> edn). American Psychiatric Association.
2. Strauss C, Hale L, Stobie B (2015) A meta-analytic review of the relationship between family accommodation and OCD symptom severity. *J Anxiety Disord* 33: 95-102.
3. Rosario-Campos MC, Miguel EC, Quatrano S, Chacon P, Ferrão Y, et al. (2006) The Dimensional Yale-Brown Obsessive-Compulsive Scale (DYBOCS): an instrument for assessing obsessive-compulsive symptom dimensions. *Mol Psychiatry* 11: 495-504.
4. Hollands JT, Abramovitch A, Tompson MC, Barlow DH (2015) A Randomized Clinical Trial of a Brief Family Intervention to Reduce Accommodation in Obsessive-Compulsive Disorder: A Preliminary Study. *Behav Ther* 46: 218-229.
5. Caporino N, Morgan J, Beckstead J, Phares V, Murphy T, et al. (2012) A structural equation analysis of family accommodation in pediatric obsessive compulsive disorder. *J Abnorm Child Psychol* 40: 133-143.
6. Van Noppen B, Steketee G (2009) Testing a conceptual model of patient and family predictors of obsessive compulsive disorder (OCD) symptoms. *Behav Res Ther* 47: 18-25.
7. Calvocoressi L, Mazure CM, Kasl SV, Skolnick J, Fisk D, et al. (1999) Family accommodation of obsessive-compulsive symptoms: instrument development and assessment of family behavior. *J Nerv Ment Dis* 187: 636-642.
8. Calvocoressi L, Lewis B, Harris M, Trufan SJ, Goodman WK, et al. (1995) Family accommodation in obsessive-compulsive disorder. *Am J Psychiatry* 152: 441-443.
9. Peris TS, Bergman RL, Langley A, Chang S, McCracken JT, et al. (2008) Correlates of accommodation in pediatric obsessive-compulsive disorder: parent, child, and family characteristics. *J Am Acad Child Adolesc Psychiatry* 47: 1173-1181.
10. Stewart SE, Beresin C, Haddad S, Egan Stack D, Fama J, et al. (2008) Predictors of family accommodation in obsessive-compulsive disorder. *Ann Clin Psychiatry* 20: 65-70.
11. Albert U, Bogetto F, Maina F, Saracco P, Brunatto C, et al. (2010) Family accommodation in obsessive-compulsive disorder: Relation to symptom dimensions, clinical and family characteristics. *Psychiatry Res* 179: 204-211.
12. Gomes JB (2011) Fatores associados à Acomodação Familiar em pacientes com Transtorno Obsessivo-Compulsivo [dissertação]. Porto Alegre: Universidade Federal do Rio Grande do Sul.
13. Storch EA, Lehmkuhl H, Pence S, Geffken G, Ricketts E, et al. (2009) Parental experiences of having a child with obsessive-compulsive disorder: Associations with clinical characteristics and caregiver adjustment. *Journal of Child and Family Studies* 18: 249-258.

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14. Koujalgi SR, Nayak RB, Pandurangi AA, Patil NM (2015) Family functioning in patients with obsessive compulsive disorder: A case - control study. *Medical Journal of Dr. D.Y. Patil University* 8: 290-294.
  15. Koujalgi SR, Pandurangi AA, Nayak RB, Patil NM (2015) Determinants of obsessive compulsive disorder. *Journal of the Scientific Society* 42: 161-165.
  16. Ramos-Cerqueira AT, Torres AR, Torresan RC, Negreiros AP, Vitorino CN (2008) Emotional burden in caregivers of patients with obsessive-compulsive disorder. *Depress Anxiety* 25: 1020-1027.
  17. Ferrão YA, Florão MS (2010) Acomodação familiar e criticismo percebido em pacientes com transtorno obsessivo-compulsivo. *Jornal Brasileiro de Psiquiatria* 59: 34-43.
  18. ABEP - Associação Brasileira de Empresas de Pesquisa, 2003. Dados com base no Levantamento Sócio Econômico (IBOPE).
  19. Amorim P (2000) Mini International Neuropsychiatric Interview (MINI): validação de entrevista breve para diagnóstico de transtornos mentais. *Ver Bras Psiquiatr* 22: 106-115.
  20. Goodman WK, Price LH, Rasmussen SA, Mazure C, Fleischmann RL, et al. (1989) The Yale-Brown Obsessive Compulsive Scale. I. Development, use, and reliability. *Arch Gen Psychiatry* 46: 1006-1011.
  21. Cooper M (1996) Obsessive-compulsive disorder: effects on family members. *Am J Orthopsychiatry* 66: 296-304.
  22. Neto EB, Teles JBM, Santos RLC (2011) Sobrecarga em familiares de indivíduos com transtorno obsessivo-compulsivo. *Rev psiquiatr clín* 38: 47-52.
  23. Guedes ML (2001) Relação família-paciente no transtorno obsessivo-compulsivo. *Rev Bras Psiquiatr* 23: 65-67.
  24. Moulding R, Frederick Aardema F, O'Connor KP (2014) Repugnant obsessions: A review of the phenomenology, theoretical models, and treatment of sexual and aggressive obsessional themes in OCD. *J Obsessive Compuls Relat Disord* 3: 161-168.
  25. Freeston MH, Ladouceur R, Gagnon F, Thibodeau N, Rhéaume J, et al. (1997) Cognitive-behavioral treatment of obsessive thoughts: a controlled study. *J Consult Clin Psychol* 65: 405-413.
  26. Stein M, Forde D, Anderson G, Walker J (1997) Obsessive-compulsive disorder in the community: An epidemiological survey with clinical reappraisal. *Am J Psychiatry* 154: 1120-1126.
  27. Sukhodolsky DG, Rosario-Campos MC, Scahill L, Katsoch L, Pauls DL, et al. (2005) Adaptive, emotional, and family functioning of children with obsessive-compulsive disorder and comorbid attention deficit hyperactivity disorder. *Am J Psychiatry* 162: 1125-1132.