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Sexual obsessions in obsessive-compulsive disorder. Definitions, models and cognitive-behavioural therapy

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Summary

Sexual obsessions in obsessive-compulsive disorder are featured by unsolicited, intrusive sexual thoughts and images. The occurrence of sexual obsessions is estimated at 16.8% among patients with obsessive-compulsive disorder (OCD).

The main aim of the article is to present the basic problems related to the phenomenon of sexual obsessions in obsessive-compulsive disorder and to showcase the cognitive and behavioural models of OCD. Apart from that, the article contains a review of literature on the efficacy of cognitive-behavioural therapy in treatment of obsessive-compulsive disorders, including the sexual-oriented ones.

Key words: sexual obsessions, obsessive-compulsive disorder

Introduction

In obsessive-compulsive disorder, the key symptoms are obsessions, defined as unsolicited thoughts (e.g., about dirt), ideations (e.g., sexual acts with animals) or desires and impulses (e.g., to stab someone with a knife), which are accompanied by strong anxiety. The obsessions are not pleasant, are unsolicited, are not voluntary, cause anxiety and suffering. Another characteristic symptom is compulsions, which include motor compulsions, repetitive behaviours (e.g., hand washing or checking on things), and mental activities (e.g., praying, counting, repeating words), which are all experienced by an individual as enforced on them and reducing anxiety temporarily [1].

The aim of this work is to present the results of literature review on the occurrence of sexual-oriented obsessive-compulsive disorders, to describe cognitive and behavioural models of OCD, and to indicate effective treatment methods.

Definition

According to the classification of mental disorders of the American Psychiatric Association [2] obsessive-compulsive disorder is diagnosed when the patient has obsessions and/or compulsions. Obsessions are defined as recurrent and persisted thoughts, impulses or images that, at some time, are experienced as intrusive or unsuitable and cause most people to experience marked anxiety or distress. Additionally, an important indicator is that a person attempts to ignore or suppress the aforementioned thoughts, impulses and ideas, as well as to neutralize them by means of other thoughts or actions (e.g., by performing an intrusive action). Compulsions, on the other hand, are defined as repeated behaviours (e.g., hand washing, ordering, checking) or mental actions (e.g., praying, counting, repeating words), in response to an obsession or according to rules that must be applied rigidly [3]. The described behaviours or mental actions are aimed at reducing the severity of anxiety and suffering or to prevent certain events or situations arousing fear. These behaviours or mental actions are not really related to what they have to neutralize or what they are supposed to prevent, but they are clearly exaggerated [2]. Obsessions or compulsions consume a lot of time (e.g., over an hour a day), cause clinically significant distress or impairment of functioning in various areas of life [2]. Most often, obsessions and compulsions occur together, but obsessions can occur alone and are not accompanied by compulsions then. Only obsessions are observed in 20% of OCD patients, in whose case obsessions often concern worry about hurting others [4].

Sexual-oriented obsessive-compulsive disorders are characterized by unwanted intrusive thoughts, images of egodystonic sexual content that may include concerns about child abuse, sexual activity with family, fears related to sexual orientation, inappropriate sexual activity (e.g. with animals, children) or aggressive sexual behaviours [5]. Sexual obsessions include recurring doubts about one's own actual sexual orientation. The patient is concerned that he will become homosexual, or that others may consider him or her to be homosexual [6].

Sexual obsessions are defined as autogenous obsessions, which means they appear by themselves [7]. They are highly averse and unrealistic and are perceived as dangerous. A patient with a sexual obsessive-compulsive disorder may be afraid of the meaning carried by thoughts referring to his or her own person (e.g., 'if I have these thoughts, it means that I am a paedophile'), behavioural implications (e.g., 'I am going to molest someone'), or moral consequences (e.g., 'such thinking is sinful, God will punish me') [8].

In terms of sexual obsessions, compulsions and neutralizing behaviours can be demonstrated by checking the level of excitement (e.g., by contracting muscles; checking body sensations in situations that activate obsessions; maintaining sufficient physical distance from others to ensure that inappropriate behaviour, e.g., touching, does not occur), or undertaking mental actions (e.g., praying). It is also worth noting that an obsessive-compulsive disorder of a sexual nature is a difficulty that is associated with a greater tendency to make hidden attempts to neutralize or suppress the above-mentioned obsessions [8]. Obsessions of this type result in an effort to remove or control thoughts.

An important differentiating aspect is the fact that sexual obsessions are not pleasant for the patient and do not constitute sexual fantasies or wishes. On the other hand, behaviours – understood as compulsions – reduce anxiety rather than bring pleasure. Similarly, distress in patients with sexual-oriented OCD results from obsessions and frustrations related to the senselessness of compulsions or their time-consuming dimension, and not only from fear of consequences, and the desire to stop the given activity is not only due to negative consequences, as it sometimes happens in paraphilias. An important differentiating element is that feelings in paraphilias and compulsive sexual behaviours are often positive and can act as triggers for sexual behaviour, unlike in the case of OCD patients, who rarely engage in activities reflecting their obsessive thoughts [5].

Additionally, some studies seem to indicate that in patients with sexual obsessions, beliefs about the importance and control of thoughts were intensified ($r = 0.53$; $p = .001$) [9]; and a correlation between schizotypic personality traits and sexual and religious obsessions was observed [7], which may be important in the therapeutic process. Schizotypal personality traits contribute to worse treatment outcomes, which may explain the worse effectiveness of therapy in patients with sexual obsessions [10].

It is worth mentioning, however, that intrusive sexual thoughts are very widespread in the general population and occur in 80–93% of people, and in terms of content they are similar to pathological obsessions [5, 11, 12]. Research by Renaud and Byers [13], including a group of 292 individuals, indicated that 50% of men and 43% of women report sexual thoughts about 'sexual activity against their sexual orientation'. Therefore, the obsessions themselves are not a problem, but what significance is ascribed to intrusive thoughts or images, as indicated by the Salkovskis model [14, 15].

Epidemiology

The prevalence of obsessive-compulsive disorder over a lifetime is around 2.5% [1], 2–3% of the general population [4]. In the United States, the 12-month prevalence of OCD is 1.2%. Among 10.5% of patients diagnosed with OCD, sexual obsessions were the primary problem [16].

The occurrence of sexual obsessions (now and in the past) is estimated at 16.8% ($n = 69$) and 9.5% ($n = 39$) respectively [17]. Research by Grant et al. [18] indicate that out of 293 individuals with OCD, 73 patients (24.9%) reported sexual obsessions in the past and 39 OCD patients (13.3%) reported current sexual obsessions. An important result in this study is that people with sexual obsessions reported a much earlier age of OCD onset (15.1 ± 5.6 years) compared with those without sexual obsessions (19.0 ± 10.3 years) ($t84.3 = 3.489$, $p = 0.001$). This information is significant in terms of the therapeutic process. In the National Comorbidity Survey Replication (NCS-R), the prevalence of sexual and/or religious obsessions in life was 30.2% [19]. However, obsessions with sexual orientation or homosexuality were observed among 8% of respondents ($n = 33$) [17] and in the study conducted by Pinto et al. [20] obsessions were observed in 9.9% of the subjects.

The average age at which the obsessive-compulsive disorder starts is 19.5 years, in 25% of OCD patients it begins at the age of 14 years [2]. The prevalence of OCD in the general population is similar in both sexes. Sexual intrusive thoughts are reported by 65% of men and 50% of women with OCD [21]. In men, OCD usually develops earlier, around 13–15 years of age, while in women in the early adulthood, around 20–24 years of age [3, 22]

Grant et al. [18] indicate that sex is not correlated with sexual obsession, while the results of the research conducted by Williams et al. [17] emphasize that many more men reported obsessions about their sexual orientation. In women symptoms associated with cleanliness are more frequent, while in men forbidden thoughts and symptoms related to symmetry, compulsive checking prevail [2, 4]

Concomitance

86–90% of OCD patients were diagnosed to have at least one additional disorder described in the DSM-IV classification [22]. Common disorders coexisting with OCD are anxiety disorders (76%, e.g., panic disorder, social anxiety disorder, generalized anxiety disorder, specific phobias) [2]. The occurrence of simple phobias among OCD patients is estimated at 50–77%, social phobia – 18%, agoraphobia – 9%, panic attacks – 11–27% [23].

Other disorders that coexist with OCD are depressive and bipolar disorders (63% altogether, in the case of 41% these are major depressive disorders) [2]. Research results indicate that patients with sexual-oriented OCD had more severe depressive symptoms (higher rates in the Hamilton Depression Scale (HAM-D)) compared to the group of individuals without sexual obsessions [14]). 25% of individuals with OCD attempt suicide. The risk increases when a major depressive disorder co-occurs [2]. Approximately 30% of OCD patients develop tic disorders over the course of their lives, most often men with the onset of OCD in their childhood [2]. More often in the groups of OCD patients there appear body dysmorphic disorders, trichotillomania (hair pulling disorder), excoriation disorder (skin picking; psychogenic excoriation), oppositional defiant disorder [2]. OCD occurs in 12% of people with schizophrenia or schizoaffective disorder. More often, obsessive-compulsive disorder occurs in people with bipolar disorder, eating disorder (anorexia nervosa, bulimia nervosa) [2]. 10% of women with OCD were diagnosed with anorexia and 33% of women with a bulimia diagnosis also experienced OCD in the past [22]. The coexistence rate of OCD with Tourette's syndrome ranges from 35% to 50% [3, 22].

Etiology: biological and environmental factors

Numerous studies indicate that the genetic factor is an important determinant of the obsessive-compulsive disorder. The compliance rate for monozygotic twins is 50–85%, and for dizygotic twins – 20–50% [1]. The OCD indicator among first-degree relatives of adults with OCD is two times higher than among first-degree relatives without OCD.

Structural and functional anomalies of the brain play an important role in the multifactorial etiopathogenesis of obsessive-compulsive disorder, As far as the physiopathological aspects are concerned, the greatest significance is attributed to dysfunction of the orbitofrontal cortex, anterior cingulate cortex and striatum [2]. The caudate nucleus is an important structure in the pathology of OCD; in individuals with focal damage/destruction within the striatum, obsessions often occur [24]. Functional imaging examinations also indicate changes in the thalamus, which plays a major role in the development of symptoms of obsessive-compulsive disorder [24].

Obsessive-compulsive disorder may be associated with insufficient serotonin level or disruption of its metabolism. This is confirmed by the fact that OCD patients improve under the influence of drugs increasing serotonin levels in the brain (e.g., clomipramine, fluoxetine, sertraline, paroxetine) [4]. The risk factors also include temperament, especially major changes concerning internalisation, higher level of negative emotionality and behavioural inhibition in childhood [2]. In children infected with streptococcus, a type of OCD called PANDAS may develop (Pediatric Autoimmune Neuropsychiaric Disorders Associated with Streptococcal infections). This illness is often featured by tic disorders and other motor abnormalities. However, when it comes to environmental factors, they include physical violence, sexual abuse, stressful or traumatic events in childhood.

Cognitive and behavioural models of sexual-oriented obsessive-compulsive disorder

According to the cognitive model of obsessive-compulsive disorder developed by Salkovskis, the source of obsessive problems are normal intrusive thoughts. They are quite common in the general population, but the difference between them and obsessions is not the fact of their occurrence, or their control, but only the way they are interpreted by the given person [25].

OCD patients interpret the occurrence of intrusive thoughts and their content (e.g., the intrusive image of two kissing women or the thought of a sexual act with a saint figure, the thought of sexually harming a child) as an indication that they may be responsible for causing harm/injury, unless they undertake an action to prevent it. This interpretation contributes to the occurrence of a negative mood (anxiety and discomfort) and neutralizing behaviours (e.g., compulsions, avoidance, seeking reassurances) that aim to reduce anxiety and the level of responsibility. As a consequence, neutralization and negative mood increase the probability of future intrusions, contribute to the consolidation of the belief about responsibility, therefore an OCD patient tries to control the activity of his/her mind, control the occurrence of potentially harmful events, thereby sustaining his/her problem [14, 25].

Interpretation of obsessive thoughts/intrusions as indicative of increased responsibility is associated with intense discomfort and anxiety, focusing primarily on intrusions and/or stimuli that are associated with them or can increase their occurrence. All this increases the availability of the original thought and preoccupation with it, and also activates behavioural responses, including neutralizing behaviours, by means of

which a person tries to reduce or avoid responsibility. Such behaviours may be overt or covert (e.g., attempts to limit/reduce thoughts, compulsions, avoidance) [11]. These elements sustain negative interpretations/beliefs, increasing the likelihood of future intrusions and doubts.

According to the model by Salkovskis [26], OCD patients have the following dysfunctional assumptions:

- Having thoughts about actions (e.g., aggressive sexual activity) is analogous to the very fact of performing these actions.
- Not preventing (or not attempting to prevent) to harm oneself or others (e.g., avoiding being alone with a child in a room, when the sexual abuse of a child is an obsession) is the same as causing harm.
- Responsibility is not mitigated by other factors (e.g., the low probability of occurrence).
- Not performing rituals (e.g., a mental ritual – for example, a prayer) in the case when an intrusion associated with the will to hurt someone has occurred, is equivalent to trying or willing to do the aforementioned harm.
- Your own thoughts should (and can) be controlled.

According to the Rachman's model [27], an OCD patient makes a thought-action fusion, that is, he/she evens thoughts and actions. Wells [12] emphasizes that intrusive thoughts (e.g., an image of kissing women) activate convictions about their meaning ('I think about it too often, it will make me a lesbian, or maybe I am already one'). Convictions contain not only information on intrusive thoughts but also knowledge about behavioural reactions ('If I control my thoughts, it will be all right'). Wells's model [12] puts more emphasis on the metacognitive aspect (e.g., the conviction about the significance of intrusive thoughts) and emphasizes that the goal of neutralization may be to relieve psychological distress [25].

Studies and models that broaden the understanding of the obsessive-compulsive disorder are also worth mentioning here. Research by Van Oudheusden et al. [28] points to a link between the reduced 'free will' experience in OCD and its basic clinical features: duration, severity, insight, and quality of life. The majority of people in the general population claim that their actions result from their own 'free will'. There are situations, for example, in neurological disorders (epileptic seizures, motor disorders), where 'free will' is weakened and the action is unintentional, automatic and cannot be controlled [29]. The first aspect of the 'free will' experience in OCD is the perceived ability to control and change the course of action in the face of obsession or coercion. As De Ridder et al. point out [30] the main problem in patients with OCD is behavioural inflexibility. It seems important that the perceived ability to control and change behaviour in the face of obsession or coercion decreases with the duration of the illness. This is consistent with recent studies that suggest that the development of OCD is associated with a shift away from consciously controlled behaviour towards habitualization.

Beliefs about the need for thought control are important factors in sustaining obsessive-compulsive disorder [12, 31]. Sookman et al. [32] confirmed that the need for

control in OCD patients was higher than in other clinical groups and healthy subjects. Studies show that there is a link between the locus of control (LOC), beliefs about the importance and control of thoughts and the general symptoms of OCD [33]. When OCD patients with generally increased need for a sense of control were asked to let go, their level of anxiety and risk assessment of negative effects associated with intrusive thoughts increased [31, 34]. Research results suggest that the greater the external locus of control (indicating a reduced sense of control), the higher the willingness to control thoughts. This enhanced discrepancy may motivate an individual to take action to reduce the gap between perceived and desired sense of control by performing compulsive behaviour, such as checking [33]. Therefore, compulsive behaviour may be an attempt to regain control over external events. When anxiety is reduced and the sense of control is achieved through compulsive behaviours (such as checking), people with OCD may feel relieved and thus maintain the ritual. Unfortunately, it is only a temporary relief, anxiety recurs and the ritual must be performed again [14, 15, 33].

The aspect of the sense of control in patients with OCD seems to be important, so it is worth considering this problem in cognitive-behavioural therapy (CBT), in conceptualization of cases and selection of appropriate therapeutic techniques increasing changes for a patient to change. Learning strategies based on gaining control, as opposed to strategies aimed at regain the sense of control (e.g., compulsive behaviours), can help restore the balance between the sense of control and desire for control by reducing the motivation for neutralization [31]. The therapy should include a range of techniques to work with the sense of control in OCD patients, e.g., techniques based on attention, acceptance and engagement therapy, motivational interview techniques, Socratic dialogue, uncertainty and negative emotion tolerance techniques, role-playing, behavioural experiments [31].

More and more often cognitive-behavioural models analyzing the mechanisms underlying the development of obsessive-compulsive disorder include the aspect of self-presentation and self-perception [35, 36]. And so, specific self-confidence beliefs, negative self-representation can be involved in the development of obsessive thoughts. Fear of oneself in unacceptable obsessions, understood as fear of who I can be or can become (e.g., 'I am a pervert', 'I will become a paedophile') can cause pathological doubts and obsessions in this field [36]. Fear of oneself is characteristic of patients with repulsive obsessions, e.g., sexual and aggressive obsessions. The results of research indicate that fear of oneself, tested by *the Fear of Self-Questionnaire* (FSQ), was the main predictor of obsessive thoughts [36, 37]. This is consistent with Rachman's assumption [11] that people with intrusive and repulsive obsessions often fear that their intrusions may point to a negative, hidden aspect of their character (e.g., 'I'm perverted', 'I'm evil, dangerous').

Obsessive-compulsive disorder is characterized by inappropriate patterns of repetitive, inflexible thinking and behaviour, which suggest cognitive inflexibility [38, 39]. Cognitive flexibility is a fundamental cognitive function that is a component of our executive functions, alongside working memory and inhibition [38]. Cognitive stiffness or weakened cognitive elasticity is characteristic of patients with OCD. Analyses show that cognitive elasticity in OCD patients is highly dependent on working memory

processes [39]. Therefore, an important element of therapeutic interactions seems to be systematic work improving cognitive elasticity in patients with OCD. It is applied particularly in patients resistant to exposure and response prevention therapy (ERP), whose main problem are intensified obsessions, e.g., sexual ones. In such cases it serves as a complementary method to attentiveness-based interventions, which brings positive therapeutic results for patients. The main purpose of such therapy is to correct cognitive deficits in terms of attention, regulation of emotions and executive functions [40, 41].

The behavioural model of obsessive-compulsive disorder is based mainly on Mowrer's two-factor model [42], which indicates that the association of certain stimuli with unpleasant experiences causes the body to learn to react with fear, which is explained by the mechanism of classical conditioning. In addition, the body learns that by certain behaviours one can reduce the severity of anxiety and discomfort. The latter aspect is explained by the mechanism of instrumental conditioning. In the case of OCD patients, the occurrence of sexual-oriented intrusive thoughts is associated with the experience of discomfort, severe anxiety. After that the patient reduces this discomfort by performing rituals (e.g., praying). Neutralizing or avoiding behaviours (e.g., avoiding places/situations in which sexual obsessions are activated) are aimed precisely at reducing the level of anxiety associated with the occurrence of intrusive thoughts (Figure 1).

Research by Rachman and Shafran [27] indicate that if an OCD patient does not perform his/her rituals, the discomfort is smaller in the case of the occurrence of intrusive thoughts. These results are the foundation of the exposure therapy.

The behavioural therapy (Exposure and Response Prevention – ERP) was created by Meyer [43], who developed working methods aimed at combating overt rituals. This therapy combined exposure, consisting in provoking an anxious situation or presenting a stimulus that triggered the ritual, with response prevention. This leads to the process of habituation, and in consequence suppresses fear [3]. Thanks to frequent and long confrontation with situations, stimuli that activate anxiety, the nervous system automatically suppresses the response to them, reducing it to a level that can be tolerated. It is a natural tendency of the nervous system to become indifferent to a new stimulus that repeats for a long time. The exposure may be gradual, starting with the strongest patient-approved stimulus and gradually increasing its intensity, or be a form of intense confrontation with anxiety-generating stimuli (the so called 'immersing' exposure).

Important elements of the exposure and response prevention therapy are *in vivo* exposures, imagination exposures, response prevention, cognitive discussions of exposures, home visits [3,22]. The aim of the exposure is to provoke the highest intensity of worry/anxiety and to maintain it for a certain time so that the habituation process will start. In the *in vivo* exposure, the patient is exposed to stimuli that trigger obsessions and the need to perform the ritual (e.g., places such as the Church in which the intrusive sexual thoughts are activated). The imagination exposure, on the other hand, involves exposure in the patient's imagination, which usually cannot be performed *in vivo*, because, for example, it violates ethical principles, as it is often the case with sexual obsessions. The patient imagines himself/herself in situations arousing anxiety and imagines what will happen when he/she does not act intrusively. The objective of the imagination exposure is to suppress obsessive thoughts and images, increase

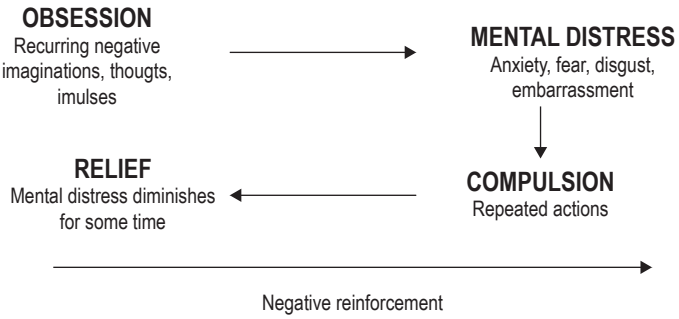

Figure 1. **Behavioural model of obsessive-compulsive disorder**

tolerance to unpleasant emotions related to obsessions, lead to the process of habituation and suppression of symptoms, distinguishing thoughts from action, and observing that the probability of negative events is low, while the costs of protecting yourself or others are high [22]. Response prevention means that the patient refrains from doing intrusive actions. First, you can encourage the patient to reduce the number of intrusive actions he/she does by half. Later on this number can be reduced even more. The purpose of response prevention, which means blocking rituals or eliminating avoidant behaviours, is diminishing the reinforcement, which is the fruit of repeating the anxiety-reducing symptom.

An important element of the therapy is a cognitive discussion of the exposure. Thanks to it, after the *in vivo* and imagination exposure, the patient learns from his/her own experience that the fear, which the OCD individual is afraid of, does not grow during the exposure. Instead, it decreases significantly, even without the patient performing the intrusive action. Multiple exposure to anxiety-arousing factors decreases anxiety, the patient can then cope with distress without intrusive activities or avoidance, and the consequences that the patient was afraid of do not occur or their probability is negligible [22]. These results of therapeutic influence undermine the patient's mistaken beliefs.

Treatment efficacy

Research has shown that one of the most effective methods of treating obsessive-compulsive disorder, especially compulsive behaviour, is exposure with response prevention. The patient is convinced that his/her reaction will prevent envisaged negative consequences. The aim of response prevention is to modify this conviction about the high likelihood of the anticipated catastrophe, when the patients does not perform the compulsive behaviour [44– 46].

Numerous studies and metanalytic reviews have indicated that the cognitive-behavioural therapy significantly reduces symptoms in patients with obsessive-compulsive disorder [23, 47, 48]. For example, meta-analyses by Hofmann and Smits [49] have revealed a significant clinical improvement in OCD patients. Similarly,

a meta-analysis of 41 studies by Carpenter et al. [50], including 4 studies on 313 OCD patients, has shown the greatest treatment effects in the case of OCD patients, compared with groups of patients with other anxiety disorders (Hedges' g = 1.13; 95% CI = 0.58–1.68; p <0.001).

Studies on the efficacy of psychotherapy in OCD patients with the use of imaging techniques indicate a reduction in glucose metabolism in the caudate nucleus in OCD patients participating in the cognitive-behavioural therapy [45, 46, 51]. Other studies indicate that after an intensive cognitive-behavioural therapy in patients with OCD, bilateral decrease in glucose metabolism in the thalamus was observed as well as a significant increase in the anterior cingulate cortex (ACC) activity [52, 53]. These neurobiological changes correlated with the degree of patients' 'recovery' and improvement of their functioning. Similarly, studies by Baxter et al. [45] indicate that both patients participating in behavioural therapy and those who used pharmacotherapy have improved significantly and have had reduced glucose metabolism in the ventromedial part of the caudate head. The efficacy of the cognitive-behavioural therapy among OCD patients is 50%–70% [54–56]. The efficacy of pharmacotherapy and behavioural therapy in patients with OCD is estimated to be 85%. However, after discontinuation of medications, recurrence of the illness occurs in 90% of patients, and after cessation of behavioural therapy – in 25% of patients [1].

Regarding OCD psychotherapeutic interventions, research suggests that, compared to most other forms of OCD (i.e., contamination or checking), sexual obsessions require longer treatment [18] and the response to therapy may be less effective [57–59]. In addition scientists [17] indicate that sexual orientation obsessions in OCD can be unequivocally associated with more time devoted to the obsession, increased level of distress, greater avoidance, all of which can be clinically significant in terms of OCD assessment and treatment.

Sexual-oriented obsessive-compulsive disorder is a problem that is usually dominated by obsessions and associated with a greater tendency to use hidden attempts to neutralize or suppress them [8]. In addition, such patients have strong beliefs about the importance and control of thoughts [9], and often have strong concerns that due to sexual obsessions they are, or may become, the person they would never want to be. These problems, which are characteristic of this group of patients, can be overcome quite well with the help of cognitive therapy techniques. Research shows that cognitive therapy brings greater improvement in patients with sexual obsessions compared to patients with religious obsessions [60]. Since exposure and response prevention therapy may be less effective in the case of obsessive-compulsive disorder of a sexual nature due to the dominance of obsession, it is worth considering in such situations the introduction of methods based on attentiveness and acceptance as a complement to ERP therapy [61].

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