

**Obsessive-Compulsive Disorder in Childhood and Its Treatment with Cognitive Behavioral Therapy**

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**ABSTRACT**

Obsessive-compulsive disorder (OCD) is a psychiatric disorder commonly experienced by adults and characterized by anxiety inducing, repetitive and annoying thoughts, ideas, impulses, compulsive and ritual behaviors that significantly impair the daily functionality of the suffering individual. OCD is also experienced among children at a significant level and its effects on the psychological state of individuals may be sustained in the further stages of their lives. The aim of this review study is to investigate the prevalence, diagnostic criteria and the causes of obsessive-compulsive disorder in the particular stage of childhood. Addressing the treatment methods for OCD in childhood is also aimed through investigation of the cognitive behavioral therapy (CBT) which is commonly used in the treatment of obsessive-compulsive disorder as a technique that proved to be effective after experimental researches. The limited number of researches on the treatment of OCD in childhood with CBT brings about the necessity to conduct more researches on this topic. Even though CBT's cognition-oriented implementation may give the impression that its employment on children with incomplete cognitive development may not yield the desired effect, adaptation of the techniques to children and their implementation with entertaining activities can increase the effectiveness of CBT during the treatment of OCD in childhood.

**Keywords:** Obsessive-compulsive disorder, cognitive behavioral therapy, childhood-onset OCD

**INTRODUCTION**

Obsessive-compulsive disorder is a psychiatric impairment inducing serious levels of discomfort with clinical and chronic symptoms, causing disruptions in academic and social aspects, posing serious risks for adults and children, showing similarities with depression, manic delusion, schizophrenia, and other anxiety disorders, and giving rise to functional impairments in daily lives of individuals (APA, 2013). In other words, OCD is a chronic disorder characterized with serious impairments in social and professional functions, occurrence of ego-dystonic, repetitive and depressing thoughts (obsession) as well as repetitive mental activities or behaviors conducted to cope with depression (compulsion) (From APA, 1994 cited in Gökçakan, 2005).

OCD is defined as a psychological disorder that can start in early childhood and maintain its severe effects in the further stages of life. Obsessions related with the acts of cleaning, stocking, checking and repeating, in addition to compulsions such as washing accompanied by fear of infection, and avoidance, and are commonly experienced in childhood (Öner & Aysev, 2001). Obsessions associated with symmetry and order, the fear of getting harmed or worrying for immediate kin, obsessions related with sexuality or religion are also commonly experienced by children and adolescents (Goodman, Price, & Rasmussen, 1989).

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Insufficient examination of OCD diagnostic criteria, and the tendency among children and adolescents towards concealing their obsessive-compulsive symptoms by fear of being humiliated by others, leads to misdiagnosis of the disease (Türkbay, Doruk, Erman, & Söhmen, 2000). In this context, the misconception that prevalence of obsessive compulsive disorder is higher among adults than the children and adolescents has started to lose its significance in recent years. The conducted researches reveal that OCD is a common disorder among children and adolescents as well (Diler, Avcı, Tamam, & Toros, 1999; Pinto, Mancebo, Eisen, Pagano, & Rasmussen, 2006; Rapoport et al, 2000; Torres et al, 2006). Additionally, almost half of the adult individuals diagnosed with obsessive-compulsive disorder underwent the first symptoms of the disease in their childhood (Karno, Golding, Sorenson, & Burnam, 1988; Pauls, Al-sobrook, Goodman, Rasmussen, & Leckman, 1995).

### **Epidemiology**

During the studies conducted for detection of OCD in childhood, it was detected that prevalence of OCD is 1% in pre-adolescence, and 2% to 4% during adolescence (Flament, 1990; Zohar, 1999). Prevalence of OCD among children and adolescents was reported as 2.7 % in a research conducted in Turkey (Diler & Avcı, 2002). In a research carried out by Abay, Pulular, Memiş and Süt (2010) on a group of high school students, prevalence of OCD was reported as 1.4 %; contamination, symmetry and suspicion were reported as the most common obsessions; and washing, control were reported as the most common compulsions.

Gender-based researches on the prevalence of OCD indicate that, in pre-adolescence OCD is more common among boys, in post-adolescence it is more common among girls, and during adolescence it is observed at an equal rate (Geller, Biederman, Jones, Park, Schwartz, & Shapiro, 1988; Leonard, Lenane, Swedo, Rettew, Gershon, & Rapoport, 1992).

Children and adolescents, diagnosed with OCD, were also found to suffer from psychiatric disorders such as tic disorder, attention deficit disorder, hyperactivity disorder and major depression in addition to OCD (Toros, Tot, & Avcı, 2002). Also, children with OCD were reported to show lower levels of spatial visualization abilities compared to those without OCD (Irak & Flament, 2007).

A study carried out to compare adults with children and adolescents on the basis of OCD symptoms indicate that, OCD symptoms can be observed in the form of hygiene obsessions and frequent question compulsions even at the age of three, and although to a lesser extent compared to adults, OCD is still very common among children and adolescents, which may lead to misdiagnosis of OCD (Türkbay et al., 2000). In the same study, children and adolescents were apt to hide their OCD symptoms out of shame and fear, and accordingly only few received professional care.

The studies indicating that nearly half of the individuals diagnosed with childhood-onset OCD are also diagnosed with this disease during their adulthood (Karno et al., 1988; Pauls et al., 1995; Stewart, Geller, Jenike, Pauls, Shaw, & Mullin, 2004), support the notion that there is a high probability for the childhood-onset OCD to develop at later ages as well (Seçer, 2014; Şimşek, 2015).

### **Diagnostic Criteria for OCD**

As one of the diagnostic criteria specified for adults, Criterion B in DSM-V (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition) states that "the individual admits that obsessions and com-

pulsions are excessive or unreasonable'', which may not always apply to children. All other diagnostic criteria are same with adults.

Childhood and adolescence OCD has the characteristics of comorbidity. Comorbid diagnosis of OCD with psychiatric disorders such as ADHD (attention deficit hyperactivity disorder), anxiety disorder and tic disorder (Çelik et al., 2012), major depression, social phobia, tourette disorder (Diler & Avci, 2002) were reported by researchers. 80 % of children and adolescents with OCD were found to be diagnosed with another psychiatric disease in the later stages of their lives (Hanna, Himle, Curtis, & Gillespie, 2005).

It is essential to distinguish the normal development rituals from obsessions and compulsions for childhood OCD. Childhood rituals help the child to partake in the daily life, get socialized and control anxiety. These include the rituals such as lucky numbers, avoiding treading on lines, and endeavoring to properly complete a task. On the other hand childhood OCD includes the rituals such as cleaning, checking, repeating and stocking, which impair the functionality of the child, induce discomfort and isolate the child from environment (Öner & Aysev, 2001).

### **Etiology**

From the etiology viewpoint of obsessive-compulsive disorder, biological factors have a major role in the development of the disease. Literature studies on the biological factors of OCD indicate that, genetic factors' effectiveness on the development of OCD vary between 45% and 60%; also in these studies, the number of patients with first degree relatives having an OCD history was found to be higher than those without first degree relatives with an OCD history (Van Grootheest, Cath, Beekman & Boomsma, 2005). In their study on OCD and family factor Pauls et al. (1995) reported that, individuals having families with at least one OCD case were also diagnosed with OCD at a rate between 7,9% and 10,3%, whereas those without an OCD case within the family were diagnosed at a rate between 1,9% and 2,0%. Serotonin and dopamine anomalies are also known to be effective on development of OCD. Alleviation of OCD symptoms by intake of selective serotonin reuptake inhibitors (SSRI) used in OCD treatment is an indication of the possibility that reduced serotonin levels may result in increased levels of OCD symptoms (Karslıoğlu & Yüksel, 2007). Also the effectiveness of dopamine booster drugs in cases where SSRI treatment does not suffice, and increased levels of OCD symptoms induced by damages on dopamine receptors, are indicatives of the effectiveness of dopamine on the development of OCD (Baykal, 2011; Koo, Kim, Roh, & Kim, 2010). Biological origins of OCD were also studied via neuroimaging. Expanded thalamus volumes were detected in a study conducted on 21 children with OCD diagnosis (Gilbert et al., 2000). In another study on children with OCD, reciprocally increased blood flow velocities were observed in various sections of the brain (Diler, Kibar, & Avci, 2004). In this context, biological factors can be assumed to have significant effects on OCD.

In addition to biological factors, other causes were also identified for development of obsessive-compulsive disorder. For instance, Sigmund Freud suggests that, an individual with OCD has the personal characteristics of the anal stage, and the individual gets obsessed in this stage with indications of excessive meanness, neatness, meticulousness, obstinacy and indecisiveness (Öztürk & Uluşahin, 2011). When considered as an adaptation and harmonization period between the impulses and ego mechanism, toilet training plays an important role in the personality development of the child. Children demand immediate fulfillment of their impulses; however toilet training acts as an impediment for this

desire. The child protests such restriction by continence or defecation. If the parent gets angry or scolds the child, the child wavers between non-compliance and guilt. Such contradiction and wavering may induce the development of an obsessive compulsive personality in the anal stage of the child (Topçuoğlu, 2003).

Another approach that explains the causes of OCD is the cognitive theory. Cognitive theory suggests that obsessions and compulsions originate from the impairments in neuropsychological and cognitive processes as well as the beliefs adopted in early ages. Obsessions include some catastrophic cognition that leads to anxiety, which is followed by the development of compulsive behaviors to alleviate such anxiety (Clark, 2004; Eryılmaz & Tosun, 2013). The person with OCD is likely to misinterpret the anxiety inducing factors as over-exaggeration and the need for responsibility (Clark, 2004).

In a study carried out to determine the major beliefs in OCD, six fields of belief, namely exaggerated evaluation of danger, exaggerated responsibility, perfectionism, attaching particular importance to others' thoughts, the desire to control ideas, intolerance for uncertainty, were defined (OCCWG, 1997). These fields of belief may manifest themselves differently among adults and children. During childhood, exaggerated evaluation of threats, the desire to control thoughts and cognitive fault-based exaggerated responsibility may not manifest themselves as clear as in adulthood (Pişgin & Özen, 2010). Additionally, lower rates of cognitive development during childhood as compared to adulthood, may account for the ambiguous role of cognitive distractions in childhood and adolescence OCD (Şimşek, 2015).

Theories for learning also made an explanation for the origins of OCD and associated its occurrence with classical and operant conditioning. In this theory, fear and anxiety are considered as learned feelings, and these feelings are amplified by aversive behaviors, thus gaining permanency. For instance, the thought of being contaminated is coded with anxiety for an individual via classical conditioning. When the thought of being contaminated crosses the individual's mind, anxiety manifests itself and the individual exhibits avoidant or evading behaviors to cope with this anxiety. The individual struggles to get rid of the thought of being contaminated and when he/she fails, he/she avoids people or places that he/she deems dirty. Avoidant and evading behaviors that provide basis for anxiety become reinforcers, resulting in a vicious circle. The individual also struggles to alleviate the anxiety by developing repetitive (compulsive) behaviors via operant conditioning. Frequent hand washing and bathing behaviors are among these compulsive behaviors. Such anxiety-reducing compulsive behaviors also act as reinforcers (Uluhan, 2016).

### **Cognitive-behavioral therapy**

Initially developed for the therapy of depression, cognitive therapy interacted with behavioral theories and took its current form in 1980s as a result of a successful integration. With its extended therapeutic scope, CBT has been applied in the treatment of diseases including panic disorder, social phobia, OCD, anxiety disorders, personality disorders, eating disorders, somatoform disorder and psychotic disorder. As an empirical approach, effectiveness of CBT was tested with several researches and favorable results were obtained (Türkçapar & Sargın, 2011).

Cognitive-behavioral therapy (CBT) is a relatively short and organized therapeutic approach in which the therapist takes an active role and instructs the receiver of the therapy. According to CBT, the individual develops prejudices and impaired cognitions while interacting with internal and external stimulus, and accordingly makes exaggerated misinterpretations. Such interpretations cause the

individual to undergo intense emotional reactions, and exhibit self-handicapping and inappropriate unfavorable behaviors. According to CBT, therapy is only possible through correction of cognitions. (Dinç, 2012).

CBT takes into account the developmental differences between children and adults BDT, and it is sensitive to such alterations. It is stated that, as in adulthood, there is an interaction between the emotions, thoughts and behaviors of children and adolescents as well, among which harmony is sought (Kendall, Kane, Howard, & Siqueland, 1990). CBT aims to alter the negative and non-functional cognitions of children and adolescents through enriching their experiences and providing them with skills (Öner, Türkçapar, & Üneri, 2008).

The treatment process of CBT starts with providing the individual with information regarding the disease, and continues with several activities such as cognitive reconstructing, building skills, exposure, exercising, response prevention, giving homework, etc. These activities are adapted based on the age and cognition level of the child and performed under the supervision of the therapist (Karaman, Durukan, & Erdem, 2011). Use of symbolic materials such as pictures, posters and game cards can help children to better understand their tasks in the activity and perform it with enthusiasm. For instance, scoring scales can be paired with thermometer pictures, and moods can be shown with smileys. Automatic thoughts and interim beliefs can be easily detected by use of techniques such as responsibility cake and thought bubbles. Additionally, considering the characteristics of the age group, providing the children with different alternatives while performing the activities (typing the homework in pc instead of writing it on paper etc.), providing them with an entertaining environment and including the family in the therapy, also implementation of patient-specific therapies improves the effectiveness of the therapy while applying CBT on children and adolescents (From Wilkes, Belsher, Rush, & Frank, 1994 cited in Öner et al., 2008). Also, considering that most of the children and adolescents do not enjoy making homework, even hearing the word itself, proposing alternative words other than "homework" ("try and see", "toy", "tool", etc.) may increase the possibility for children to make their homework and bring them to the sessions.

### **Treatment of OCD with CBT**

Medication is widely used in the treatment of OCD. Especially the drugs such as fluoxetine, fluvoxamine, sertraline, paroxetine in SSRI anti-depressant group, are effectively used in the treatment of children and adolescents (Öner & Aysey, 2000). Also, the studies conducted on children with OCD diagnosis indicate that CBT therapy yields significant improvements in aversion of OCD symptoms. Medication accompanied with CBT, and CBT alone proved to yield better results than medication alone (POTS, 2004). Moreover, CBT alone is assumed to be more effective without medication (Dilbaz & Karamustafaloğlu, 2008). Additionally, OCD patients that received CBT therapy were monitored for a period of 6 months to 6 years, 75% of the patients were found to maintain their good condition with a low possibility of recurrence of the disease (Bayraktar, 1997).

Treatment of obsessive-compulsive disorder with cognitive-behavioral therapy aims to control the disease, not the patient. OCD patients should be clearly informed with the knowledge that "control" is a basic tendency. An individual with OCD undergoes anxiety due to the thoughts that he/she is aware of, differently from other psychiatric disorders. In this context, the disorder can be explicitly discussed with the patient and the concepts can be put in a more conceivable form. For instance, obsessions can be

referred to as fixation or threat, and compulsions and avoidant behaviors can be mentioned as precaution. While communicating the frame of the therapy to the patient, this principle can be implemented by choosing a proper and simple behavior with a view to provide the patient a better understanding for the principle of controlling the disease. After personally witnessing the validity of the principle, the patient can be more open to cooperation in the further stages of the therapy (Gökçakan, 2005).

Exposure and responsive prevention are the most commonly used techniques in the treatment of OCD. Negative and discordant responses are neutralized and the individual is equipped with healthier behaviors by these techniques. The principles of adapting and extinguishing are included in this process. During the therapy, the patient is gradually subjected to the stimulus or situations that lead to anxiety or avoidant behaviors; anxiety is intentionally induced; however manifestation of avoidant behaviors is prevented. During this confrontation, the patient's anxiety is first intensified, then maximized, and at the end it is gradually reduced and extinguished. As a precaution for any unwanted situation after the application, the patient should be previously informed about the intensification and extinguishing of anxiety (Bayraktar, 1997; Köroğlu, 2013).

Cognitive-behavioral therapy became significantly effective in treatment of children with OCD diagnosis (Pişgin & Özen, 2010). Exposure and responsive prevention methods are commonly used for children as well, as in the treatment of adults. In their study İnci, Akyol Ardiç, İpci, and Ercan (2016) addressed the case of a 14 year old girl, who developed obsessions for being contaminated by the gas passed by her parents; and compulsions as closing the door, avoiding sitting beside her parents, also avoiding to get in her room with the same clothes she wore while sitting beside her parents, as a means to cope with the anxiety originating from this thought of hers. In such a case, interim beliefs such as "I should be clean, I can be contaminated if I sit beside my parents" in line with the basic belief of "perfectionism"; and automatic thoughts such as "I will be contaminated, I will be soiled with that gas again" can be expected from the girl. Gradually increasing the duration of sitting beside her parents can be an example to exposure, and getting in her room without putting of the clothes that she wore while sitting beside her parents can be an example to responsive prevention. During the treatment process, such applications are performed under supervision of a therapist and they are supported with homework. Some of the children or adolescents may not admit that they're facing a problem, or they may associate the problem with environment. This can complicate the treatment process and reduce the effectiveness of CBT in treatment (Türkçapar, 2015). Reluctance of children for coming to the therapy, their being unaware of the problem and perceiving the treatment as a way of punishment are some of the other factors that could hinder the therapy.

## **CONCLUSION**

As a prevalent disease among adults, significant rates of incidence of obsessive-compulsive disorder in childhood, and high levels of probability for recurrence of childhood-onset OCD in the stages of adulthood, renders OCD an important risk factor for children and adolescents. Even though the children's tendency to hide the symptoms for various reasons and resultant misdiagnosis of the disease lead to the misconception that OCD is rarely experienced in childhood, recent studies on the subject became effective to alter this thought (Rapoport et al., 2000; Diler & Avcı, 2002; Pinto et al., 2006; Abay et al., 2010; Şimşek, 2015). However inadequate number of such studies makes it difficult to emphasize the importance of the situation. In this respect, it becomes a necessity to increase the number of review and

case studies (Beşiroğlu, Özer, Bal, & Sağlam, 2004; Gökçakan, 2005; İnci et al., 2016; Kuru & Türkçapar, 2013; Lapsekili, Temizsu, & Ak, 2012). Case studies on OCD treatment with cognitive-behavioral therapy, which proved to be an effective method in OCD therapy, will provide in-depth information and serve as a source for the studies in the field. In addition to the techniques such as exposure and responsive prevention commonly used in the treatment of childhood OCD with CBT, motivating and captivating entertaining activities should also be included in the treatment process. Techniques including games and rewards will both help the child to adopt the therapy and understand the frame of treatment.

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