


Obsessive-compulsive disorder from a cognitive-behavioural point of view

Zaburzenie obsesyjno-kompulsyjne w ujęciu behawioralno-poznawczym

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Abstract

The prevalence of obsessive-compulsive disorder in the adult population is estimated at about 2–3%, while in children the prevalence of this disorder is higher, and it is considered to be one of the most common neuropsychiatric diseases in paediatric populations. Symptoms from the obsessive-compulsive disorder spectrum can vary in severity or occur with varying frequency. In severe cases, they are time-consuming and disorganise functioning, causing psychological stress not only to patients but often to those around them. The level of insight differentiates individuals with obsessive-compulsive disorder, affecting the course of treatment. Low insight often accompanies poor susceptibility to pharmacotherapeutic and psychotherapeutic interactions, while high levels of criticism may inhibit the motivation to seek help, out of fear of social judgement. Obsessive-compulsive disorder deserves the attention of clinicians because, without appropriate treatment, the disorder can take a chronic form, often becoming a trigger for depression, social phobia, or addiction. American data show that 90% of respondents meeting the criteria for obsessive-compulsive disorder also suffer from another Axis I disorder. Cognitive-behavioural therapy is a method with proven effectiveness in the treatment of Axis I disorders, including obsessive-compulsive disorder. The first goal of this paper is to present cognitive models of obsessive-compulsive disorder that will allow clinicians to understand the nature of this condition. The second goal is to describe the possibilities and tools used in cognitive-behavioural psychotherapy of patients.

Keywords: obsessive-compulsive disorder, cognitive-behavioural therapy, psychotherapy, diagnostic criteria

Streszczenie

Rzeczony zaburzenie obsesyjno-kompulsyjne w dorosłej populacji szacowane jest na około 2–3%, podczas gdy u dzieci częstość występowania tego zaburzenia jest wyższa – uznaje się je za jedną z najczęstszych chorób neuropsychiatrycznych w populacjach pediatrycznych. Objawy ze spektrum zaburzenia obsesyjno-kompulsyjnego mogą przyjmować różne nasilenie lub występować z różną częstotliwością. W cięższych przypadkach bywają czasochłonne i dezorganizują funkcjonowanie, wywołując stres psychiczny nie tylko u osób cierpiących z powodu obsesji i kompulsji, ale często również u najbliższego otoczenia. Poziom wglądu różnicujący osoby z zaburzeniem obsesyjno-kompulsyjnym może wpływać na przebieg leczenia. Niski wgląd często towarzyszy słabszej podatności na oddziaływania farmakoterapeutyczne i psychoterapeutyczne, podczas gdy wysoki poziom krytycyzmu może hamować motywację do zwrócenia się po pomoc, z lęku przed oceną społeczną. Zaburzenie obsesyjno-kompulsyjne zasługuje na uwagę klinicystów, ponieważ bez odpowiedniego leczenia schorzenie to może przybierać formę chroniczną, nierzadko stając się czynnikiem wyzwalającym depresję, fobię społeczną czy uzależnienia. Dane amerykańskie pokazują, że 90% respondentów spełniających kryteria zaburzenia obsesyjno-kompulsyjnego cierpi również na inne zaburzenie osi I. Terapia poznawczo-behawioralna jest metodą o udowodnionej skuteczności w leczeniu zaburzeń z osi I, w tym zaburzenia obsesyjno-kompulsyjnego. Celem niniejszej pracy jest przedstawienie modeli poznawczych zaburzenia obsesyjno-kompulsyjnego, które pozwolą klinicystom zrozumieć istotę tego schorzenia, a także opisanie możliwości i narzędzi stosowanych w psychoterapii poznawczo-behawioralnej pacjentów.

Słowa kluczowe: zaburzenie obsesyjno-kompulsyjne, terapia poznawczo-behawioralna, psychoterapia, kryteria diagnostyczne

INTRODUCTION

Recent studies have estimated the prevalence of obsessive-compulsive disorder (OCD) at 2–3%, although figures vary by region. Also, epidemiological data may be underestimated due to the fact that many people suffering from obsessions and compulsions delay contacting specialists, and statistical data reflect only diagnosed cases of the disorder (Jalal et al., 2022; Stein et al., 2019). Both the symptomatology and aetiology of OCD are very complex. This complexity is reflected in changes in the qualification of OCD to a specific category of disorders. In earlier classifications, it was placed in the category of “stress-related and somatoform neurotic disorders”, while in the latest – ICD-11 classification and DSM-5 classification, OCD found its place in the category of “obsessive-compulsive and related disorders”, among the dysmorphic disorder, trichotillomania, hoarding, skin picking, Tourette syndrome, and hypochondria (Pużyński and Wciórka, 2000). Both cognitive-behavioural therapy (CBT) and pharmacotherapy based on the use of selective serotonin reuptake inhibitors (SSRIs), serotonin and norepinephrine reuptake inhibitors (SNRIs) or tricyclic antidepressants have proven effectiveness in the treatment of OCD (Del Casale et al., 2019). There are also several brain stimulation techniques considered as an add-on treatment for patients resistant to pharmacotherapy and/or psychotherapy, including deep brain stimulation (DBS), transcranial magnetic stimulation (TMS), transcranial direct current stimulation (tDCS), electroconvulsive therapy, and vagus nerve stimulation (Rapinesi et al., 2019); however, discussion of those methods is beyond the scope of this article.

DIAGNOSTIC CRITERIA AND AETIOLOGY OF OCD

Diagnosis of the OCD is based primarily on data obtained from the patient. There are also methods relying on questionnaires, such as the Obsessive Beliefs Questionnaire (OBQ), Structured Clinical Interview for Obsessive-Compulsive Spectrum Disorders (SCID-OCS), or Yale-Brown Obsession and Compulsive Scale (Y-BOCS) (Jeśka, 2012; Storch et al., 2015). However, due to the low sensitivity of the tool described, it should be considered as a screening measure and must be supplemented with a clinical interview or specific questionnaires which are currently being developed, to determine the nature and severity of symptoms. A good example of such a specific questionnaire might be the Penn Inventory of Scrupulosity (PIOS), developed to evaluate the severity of scrupulosity symptoms as a subtype of OCD (Albińska, 2022).

In the DSM-5 classification, OCD belongs to the spectrum of obsessive-compulsive related disorders (OCRD). Compulsions are considered to be a linking element of disorders belonging to the spectrum. Obsessions are defined as recurrent and fixed thoughts, impulses or imaginings

experienced as intrusive and inappropriate, and usually causing anxiety or distress. Compulsions are repetitive behaviours or mental activities that a person feels compulsion to perform in response to an obsession to reduce the level of intense emotions and suffering or prevent certain events from happening. Individuals suffering from OCD may differ in their level of insight, as reflected in the classification (Galecki and Świącicki, 2015). Intrusive thoughts generate a state of tension and motivate the patient to perform certain activities (checking, cleaning, etc.) aimed at tension relief, which may develop into rituals causing distress and interfering with social and individual functioning. The characteristic feature is patients’ unsuccessful attempts to resist them. The diagnostic criteria included in the classifications sound laconic in comparison with the rich symptomatology of OCD. The aetiology of this disorder is complex, including personality features, and genetic, neurological and even infectious factors. Neurotransmission disorders in specific areas of the brain play an important role in the pathogenesis of the OCD and determine the specificity of the symptoms. In addition to serotonergic dysfunction, imaging studies have shown increased dopamine transporter density in the basal ganglia region and relatively decreased dopamine transporter density in the striatum or lesions in the caudate nucleus region (Kalanthroff and Wheaton, 2022). Information about the possible neurobiological basis of OCD is a key part of patient psychoeducation. In children, a risk factor for the sudden onset of OCD may be a streptococcal infection (Swedo et al., 2004). The diversity of symptoms and background of the disorder differentiate both the prognosis and susceptibility to therapeutic interventions (Karch and Pogarell, 2012). Twin studies indicate a multifactorial aetiology of OCD that combines polygenic inheritance and environmental risk factors. Neuroimaging studies have revealed the importance of the thalamocortical circuit in the pathophysiology of OCD (Pauls et al., 2014). Also, similarity of anomalies in the functioning of brain structures responsible for cognitive control in OCD and ADHD was observed (Brem et al., 2014).

BEHAVIOURAL AND COGNITIVE MODELS OF OCD

Many models have been created to illustrate the cognitive concepts of OCD. The two-factor learning theory first presented by Hobart Mowrer in regard to the development of phobia, was then applied in the 1950s by Dollard and Miller to explain the formation of symptoms in OCD. According to this theory, fear of a neutral situation is learned through classical conditioning by associating it with a fearful stimulus (thoughts, objects, etc.). Then, on the basis of instrumental conditioning, the avoidance response is perpetuated (reinforced by the relief experienced). Wells created a metacognitive model of OCD, where negative beliefs evaluating intrusive thoughts and rituals play a key role in maintaining OCD symptoms. These beliefs involve equating

thoughts with actions and catastrophic perceptions of the consequences of experienced emotions. To describe meta-cognitive beliefs, Wells introduced the concept of thought-action fusion (TAF), which he identified as one of the four factors crucial in the development of OCD, along with inflated moral standards, depression, and anxiety. The author pointed out that unacceptable thoughts and impulses naturally experienced by 90% of the general population are effectively reduced in healthy people by such cognitive responses as distraction and diversion. These strategies are weakened in people experiencing depression or high anxiety. Individuals with OCD thus feel helpless in the face of their own unacceptable thoughts, which exacerbates their anxiety and prompts them to replace frightening thoughts with other thoughts or rituals (Wells, 2010). The theory proposed by Carr emphasises the role of irrational risk assessment (overestimation of both the probability of occurrence and the possible consequences) of a given fearful situation, which causes an increase in anxiety, resulting in it being neutralised by rituals and obsessive activities. McFall and Wollersheim, looking for the reasons for these unrealistic estimates, divided the cognitive process in people with OCD into two stages: primary and secondary assessment of the situation. In the process of primary cognitive appraisal, the individual estimates the likelihood of a negative scenario according to the subjectively perceived own resources for coping with a specific situation, which results in an increase in anxiety. In the secondary assessment of the consequences of efforts made to deal with the threat, neutralising (compulsive) behaviours are initiated. In both primary and secondary appraisal, dysfunctional beliefs related to perfectionism play an important role, e.g. "I should be strong enough to prevent a catastrophe", "I should not have certain thoughts or feelings" (primary appraisal), "Rituals will reduce the risk of a given situation" (secondary assessment). In this model, even the most strenuous rituals are easier to accept than the anxiety about a perceived external threat, or guilt about unacceptable thoughts or feelings (Bryńska, 2007). In the behavioural-cognitive approach, OCD, like many other Axis I disorders, can be described using the general model of problem development created by Aaron Beck, in which the occurrence of the disorder is preceded by specific early experiences responsible for shaping core beliefs, rules, and patterns. For people predisposed to develop OCD, these beliefs are usually closely related to perfectionism, fear of failure, loss of control, or excessive responsibility. The subsequent set of circumstances – difficult or challenging situations – confirms the validity of these basic assumptions. When faced with a critical situation, core beliefs reveal themselves in the form of maladaptive automatic thoughts, which, by increasing intense emotions and related physiological symptoms, provoke a person to undertake certain protective behaviours aimed at preventing a possible disaster (e.g. compulsive checking). To illustrate the pattern: the early childhood experience of being punished for failures with violence or rejection, as well as excessively

high standards in the family of origin, may become the basis for the emergence of certain core beliefs and rules, e.g. "I am incompetent". In the future, such maladaptive beliefs may be activated in specific situations, e.g. when undertaking a task with a high risk of error, experience of failure, etc. Such critical events evoke automatic negative thoughts, e.g. "I do everything wrong", "I will lose everything". Automatic thoughts cause an immediate anxiety response, accompanied by vegetative symptoms (e.g. tension in the whole body, choking, etc.) and behavioural reactions including obsessive thoughts (e.g. image of catastrophic consequences of making a mistake) and actions to reduce tension (e.g. compulsive checking).

The models presented by Paul Salkovskis, Hilary Warwick and Stanley Rachman (the latter applied to patients with predominant obsessions and marginal compulsions) capture both aspects of the OCD maintenance mechanism: cognitive and behavioural. At the beginning (as in Beck's model) core beliefs and their corresponding rules (assumptions) appear in the form of automatic thoughts, which, by causing tension and unpleasant physiological symptoms, motivate the patient to search for neutralising behaviours (checking rituals, washing, etc.) which, by bringing temporary relief, eventually lead to the growth of anxiety. According to Salkovskis, individuals suffering from OCD most typically assign excessive responsibility to themselves, based on cognitive schemas involving a sense of duty or guilt. The authors of the concept distinguish the so-called "normal" obsessions, i.e. repetitive thoughts associated with a sense of responsibility, but not assessed as dangerous and not causing pathological fear. Neutralising behaviours, i.e. avoidance, adherence to personal restrictions, repeated checking, reassurance seeking, etc., ultimately increase the arousal and frequency of intrusive thoughts, leading to the development of pathological obsessions and rituals (Młynarczyk, 2018).

SELECTED THERAPEUTIC TECHNIQUES

Cognitive techniques are used to modify cognitive distortions and reinterpret emerging obsessive thoughts, thereby reducing stress and the related need to control or neutralise such thoughts. The goals of cognitive modification include:

- helping the patient to recognise the lack of a real connection between their obsessions and behaviour;
- modification of core beliefs regarding control and responsibility;
- awareness of the essence of the problem, which is thinking and making decisions, not a real threat;
- awareness of the existence of alternative explanations of the nature of the problem (Bryńska, 2007).

The first stage is psychoeducation on the role of automatic thoughts and cognitive distortions, and then their identification, followed by a discussion, i.e. a critical assessment of automatic thoughts. The patient is stimulated to look for all possible arguments confirming and undermining the truth

of thoughts relating to the rightness of implementing compulsions, and to formulate an alternative thought which is a rational (realistic) response to the automatic one, e.g. “If I don’t check again, I can’t stand this anxiety” (automatic thought) – “Feeling anxious is not a real threat to me” (alternative thought). Working at the level of core and intermediate beliefs may (as in the case of working on automatic thoughts) take the form of a discussion on their truth or consideration of arguments “for” or “against” a given belief. The primary goal is to modify the schema by bringing awareness to the core beliefs on which misinterpretations are based. In patients with OCD, the most problematic aspects are their excessive sense of responsibility and an overestimated risk of unfortunate events. Behavioural experiments can be used to challenge the fusion of thought and action by testing the impact of a particular thought on actual events. One of the techniques modifying such maladaptive attitudes is the paradox technique, which aims to make the patient aware of the lack of power to cause or prevent certain events through thinking or rituals. The patient is first asked to estimate the strength of his or her belief: “If I am thinking or imagining something, it will probably happen” and then to cause some impossible situation (e.g. turning the therapist into an animal) to happen by thoughts alone. It is worth noting that the susceptibility of schemas to modification in individual patients may vary, depending on factors such as the duration of the schema and its fixation, type of cognitive distortions, compensatory strategies, and the content of obsessions. Some cases require recognition of the existence of various alternative factors that may be responsible for the occurrence of certain events, before it becomes possible to reinterpret symptoms not as a threat resulting from the lack of control but as a result of excessive control of one’s own mental activity.

Behavioural techniques create the possibility of introducing changes in everyday functioning. Patients are encouraged to undertake new activities and observe their effects. In OCD therapy, such behavioural experiments can be carried out during sessions together with the therapist or in between sessions by the patient alone. The primary goal of behavioural experiments is for the patient to gain the knowledge and experience needed to test the truth of automatic thoughts and beliefs. The experiments are designed to make the patient aware of the differences between the true responsibility for events and their subjective sense of responsibility, which they experience everyday. A useful technique involves keeping a diary in which the patient records the frequency of obsessive thoughts and compulsions between sessions, and then enriches the monitoring with periodic behavioural changes, e.g. increasing the amount of time spent on alternative enjoyable activities by reducing the time spent on obsessions and/or compulsions. Such self-observations help the patient realise the possibility of functioning despite the appearance of intrusive thoughts and to endure the associated discomfort without performing a compulsion. Self-observation also shows the patient that

increasing the effort put into extinguishing thoughts intensifies them more. In this way, the patient works through the problem not only cognitively, but also emotionally. By ceasing control of thoughts, patients have a chance to experience the lack of connection between thoughts and the catastrophic consequences which they fear (Popiel and Pragłowska, 2008). A therapeutic model that combines cognitive and behavioural techniques is exposure and response prevention therapy originally developed and led by Victor Meyer and his team, and later expanded by Edna Foa and Michael Kozak, who enriched it by supplementing the in vivo exposure (i.e. confronting fearful situations in real life) with an imaginary exposure consisting in visually imagining a sequence of images depicting a catastrophe which, according to the patient, is to occur if they do not perform a ritual. The essence of this approach involves behavioural experiments in which the patient is confronted with situations that evoke fear of catastrophic consequences and, at the same time, refrains from neutralising behaviours. The intervention is based on the phenomenon of habituation, which leads to discomfort decreasing over time. Gradually extending the exposure time increases its effectiveness, weakening the desire to perform the ritual. Exposures can be carried out both in the presence of a therapist and independently by the patient. Gradation of exposure by scaling tension with SUDS (Subjective Units of Discomfort Scale) helps with prioritising exposures, starting with those of moderate difficulty. The goal is to help the patient experience that the discomfort felt when refraining from neutralising an intrusive thought passes over time and the catastrophic effects do not occur. In addition to the previously mentioned habituation, the method is based on the cognitive processing of the perceived threat and one’s own ability to independently cope with the state of tension caused by obsessive thoughts (Foa et al., 2019). There are now more detailed and specific CBT models that conceptualise the emergence and persistence of symptoms of particular subtypes of OCD, developed for specific groups of patients. In this way, CBT protocols are becoming more specific, as opposed to the model based on pharmacotherapy, which is not specifically related to the content of patient’s obsessions and compulsions.

EFFECTIVENESS OF COGNITIVE-BEHAVIOURAL THERAPY IN THE TREATMENT OF OBSESSIVE-COMPULSIVE DISORDER

There are data supporting the effectiveness of CBT in the treatment of OCD in children and adults (Carpenter et al., 2018; Wu et al., 2016). The Pediatric OCD Treatment Study (POTS) [Pediatric OCD Treatment Study (POTS) Team, 2004] report shows that for children and adolescents, it is effective to start OCD therapy with a combination of pharmacological interactions (SSRIs) and CBT, or to use CBT alone. There are also reports indicating incomplete

effectiveness of CBT in patients with OCD (Storch et al., 2020). Some researchers point out that in many patients traditional forms of CBT fail to bring the expected results. They postulate intensification of research into the use of other therapeutic approaches in the treatment of this disorder and differentiation of therapeutic techniques depending on the nature of symptoms (Hilbert et al., 2021; Krzyszkowiak et al., 2019; Külz et al., 2019). In recent years, there has been growing interest in the use of “third-wave” therapies to treat psychiatric disorders including OCD. These new therapies are fundamentally different from existing CBT techniques. While traditional CBT aims to change the nature of the obsessive thought through discussion, the “third-wave” therapies are focused on changing the relationship between the obsessive thought and the ensuing emotional state. Acceptance and commitment therapy (ACT), a novel and effective intervention in OCD, replaces discussion with obsessive thoughts with learning to accept them and distance oneself. The evidence base for the use of ACT in OCD indicates that ACT contributes to reducing the severity of symptoms in OCD. When used in conjunction with SSRIs, it is as effective as a combination of CBT and pharmacotherapy (Philip and Cherian, 2022). Also, attention is often drawn to the effectiveness of CBT conducted with the use of new technologies and to the fact that it is a good strategy to improve treatment accessibility for patients. Among other methods, researchers have explored remotely delivered CBT, such as video-conferences and telephone consultations, finding data supporting the effectiveness of both (Jalal et al., 2022). Computerised and Internet-based CBT involve reading modules that include psychoeducation, constructing an exposure hierarchy, and instructions to conduct *in vivo* exposure (Andersson et al., 2012; Wootton, 2016). Applying new technologies – such as exposure therapy in virtual reality or just computerised version of CBT – might intensify treatment. Exceptions include patients with severe forms of the disorder, resistant to traditional drug treatment, for whom face-to-face therapy is more advisable.

Conflict of interest

The author does not report any financial or personal connections with other persons or organisations which might negatively affect the content of this publication and/or claim authorship rights to this publication.

Author contribution

Original concept of study; collection, recording and/or compilation of data; analysis and interpretation of data; writing of manuscript; critical review of manuscript; final approval of manuscript: AMK.

References

- Albińska P: Scrupulosity – cognitive-behavioural understanding of religious/moral obsessive-compulsive disorder. *Psychiatr Psychol Klin* 2022; 22: 25–39.
- Andersson E, Enander J, Andrén P et al.: Internet-based cognitive behaviour therapy for obsessive-compulsive disorder: a randomized controlled trial. *Psychol Med* 2012; 42: 2193–2203.
- Brem S, Grünblatt E, Drechsler R et al.: The neurobiological link between OCD and ADHD. *Atten Defic Hyperact Disord* 2014; 6: 175–202.
- Bryńska A: Zaburzenie obsesyjno-kompulsyjne. Rozpoznawanie, etiologia, terapia behawioralno-poznawcza. Wydawnictwo Uniwersytetu Jagiellońskiego, 2007: 46–49.
- Carpenter JK, Andrews LA, Witcraft SM et al.: Cognitive behavioral therapy for anxiety and related disorders: a meta-analysis of randomized placebo-controlled trials. *Depress Anxiety* 2018; 35: 502–514.
- Del Casale A, Sorice S, Padovano A et al.: Psychopharmacological treatment of obsessive-compulsive disorder (OCD). *Curr Neuropharmacol* 2019; 17: 710–736.
- Foa EB, Yadin E, Lichner TK: Zaburzenie obsesyjno-kompulsyjne. Terapia ekspozycji i powstrzymania reakcji. Podręcznik terapeuty. Gdańskie Wydawnictwo Psychologiczne, 2019.
- Gałęcki P, Świącicki Ł (eds.): Kryteria diagnostyczne z DSM-5. Desk reference. Edra Urban & Partner, Wrocław 2015.
- Hilbert K, Jacobi T, Kunas SL et al.: Identifying CBT non-response among OCD outpatients: a machine-learning approach. *Psychother Res* 2021; 31: 52–62.
- Jalal B, Chamberlain SR, Robbins TW et al.: Obsessive-compulsive disorder – contamination fears, features, and treatment: novel smartphone therapies in light of global mental health and pandemics (COVID-19). *CNS Spectr* 2022; 27: 136–144.
- Jeśka M: [Tools for measuring the symptoms of obsessive-compulsive disorder (application, properties, advantages and disadvantages)]. *Review of Clinical Neuropsychiatry* 2012; 4: 137–142.
- Kalanthroff E, Wheaton MG: An integrative model for understanding obsessive-compulsive disorder: merging cognitive behavioral theory with insights from clinical neuroscience. *J Clin Med* 2022; 11: 7379.
- Karch S, Pogarell O: Neurobiologia zaburzenia obsesyjno-kompulsyjnego. *Psychiatr Dypł* 2012; 9: 7–13.
- Krzyszkowiak W, Kuleta-Krzyszkowiak M, Krzanowska E: Treatment of obsessive-compulsive disorders (OCD) and obsessive-compulsive-related disorders (OCRD). *Psychiatr Pol* 2019; 53: 825–843.
- Külz AK, Landmann S, Cludius B et al.: Mindfulness-based cognitive therapy (MBCT) in patients with obsessive-compulsive disorder (OCD) and residual symptoms after cognitive behavioral therapy (CBT): a randomized controlled trial. *Eur Arch Psychiatry Clin Neurosci* 2019; 269: 223–233.
- Młynarczyk M: [Cognitive-behavioural therapy techniques for obsessive-compulsive disorder]. *Acta Universitatis Lodzianis. Folia Psychologica* 2018; 22: 33–54.
- Pauls DL, Abramovitch A, Rauch SL et al.: Obsessive-compulsive disorder: an integrative genetic and neurobiological perspective. *Nat Rev Neurosci* 2014; 15: 410–424.
- Pediatric OCD Treatment Study (POTS) Team: Cognitive-behavior therapy, sertraline, and their combination for children and adolescents with obsessive-compulsive disorder: the Pediatric OCD Treatment Study (POTS) randomized controlled trial. *JAMA* 2004; 292: 1969–1976.

- Philip J, Cherian V: Acceptance and commitment therapy in obsessive-compulsive disorder: a case study. *Indian J Psychol Med* 2022; 44: 78–82.
- Popiel A, Pragłowska E: Psychoterapia poznawczo-behavioralna. Teoria i praktyka. Wydawnictwo Paradygmat, Warszawa 2008.
- Pużyński S, Wciórka J (eds.): Klasyfikacja zaburzeń psychicznych i zaburzeń zachowania w ICD-10. Opisy kliniczne i wskazówki diagnostyczne. Uniwersyteckie Wydawnictwo Medyczne Vesalius, Instytut Psychiatrii i Neurologii, Kraków, Warszawa 2000.
- Rapinesi C, Kotzalidis GD, Ferracuti S et al.: Brain stimulation in obsessive-compulsive disorder (OCD): a systematic review. *Curr Neuroparmacol* 2019; 17: 787–807.
- Stein DJ, Costa DLC, Lochner C et al.: Obsessive-compulsive disorder. *Nat Rev Dis Primers* 2019; 5: 52.
- Storch EA, De Nadai AS, Conceição do Rosário M et al.: Defining clinical severity in adults with obsessive-compulsive disorder. *Compr Psychiatry* 2015; 63: 30–35.
- Storch EA, Peris TS, De Nadai A et al.: Little doubt that CBT works for pediatric OCD. *J Am Acad Child Adolesc Psychiatry* 2020; 59: 785–787.
- Swedo SE, Leonard HL, Rapoport JL: The pediatric autoimmune neuropsychiatric disorders associated with streptococcal infection (PANDAS) subgroup: separating fact from fiction. *Pediatrics* 2004; 113: 907–911.
- Wells A: Terapia poznawcza zaburzeń lękowych. Praktyczny podręcznik i przewodnik po teorii. Wydawnictwo Uniwersytetu Jagiellońskiego, 2010: 21–22.
- Wootton BM: Remote cognitive-behavior therapy for obsessive-compulsive symptoms: a meta-analysis. *Clin Psychol Rev* 2016; 43: 103–113.
- Wu Y, Lang Z, Zhang H: Efficacy of cognitive-behavioral therapy in pediatric obsessive-compulsive disorder: a meta-analysis. *Med Sci Monit* 2016; 22: 1646–1653.