

The Role of Fear of Self, Perfectionism, and Rumination on Obsessive-Compulsive Disorder and its Treatment

Benlik Korkusu, Mükemmeliyetçilik ve Ruminasyonun Obsesif-Kompulsif Bozukluk ve Tedavisindeki Rolü

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ABSTRACT

Obsessive-Compulsive Disorder (OCD) has been widely discussed throughout the years in various research, discussing the suffering of individuals, social issues, as well as treatment methods. Unfortunately, due to the impact of the disorder itself and the distressful side effects of treatment, patients tend to drop out, subsequently even commit suicide. Recent literature shows that the difficulties faced by OCD patients might be due to some transdiagnostic variables. Fear of self, perfectionism, and rumination, which are highly common among OCD patients, might share cognitive and emotional mechanisms, such as heightened self-evaluative processes, maladaptive cognitive styles, and difficulties in emotion regulation, that contribute to the onset and maintenance of the disorder. Their interplay hinders engagement in gold-standard treatments like exposure and response prevention, as perfectionistic ideals and self-concealment foster avoidance, while rumination sustains hopelessness. This review aims to elaborate further on these variables (i.e., fear of self, perfectionism, and rumination), how common they are in OCD, how they impact the daily lives of patients with OCD, how they contribute to the disorder, and affect the treatment process.

Keywords: Obsessive-compulsive disorder, self concept, perfectionism, mental health

ÖZ

Obsesif-Kompulsif Bozukluk (OKB), bireylerin bu bozukluğa bağlı olarak yaşadıkları sıkıntılar, sosyal problemler ve tedavi yöntemleri yıllar içerisinde çeşitli araştırmalar tarafından ele alınmış ve tartışılmıştır. Öte yandan, OKB'nin yol açtığı olumsuzluklar ve tedaviye bağlı olarak ortaya çıkan sıkıntılı yan etkiler nedeniyle hastalar tedaviyi yarıda bırakma eğiliminde olabilmekte ve bu durum bazen intiharla sonuçlanabilmektedir. Son yıllarda yapılan çalışmalar, OKB hastalarının yaşadıkları zorlukların birtakım tanımlar üstü değişkenle açıklanabildiğine işaret etmektedir. Örneğin, OKB hastalarında yaygın olarak karşılaşılan benlik korkusu, mükemmeliyetçilik ve ruminasyon, kendini değerlendirme süreçlerinde artış, uyumsuz başa çıkma stilleri ve duygu düzenleme güçlükleri gibi bazı ortak bilişsel ve duygusal mekanizmalara sahip olup rahatsızlığın başlangıcında ve devamlılığında etkilidir. Bu etkileşim, maruz kalma ve tepki önleme gibi altın standart tedavilere uyumu engeller, çünkü mükemmeliyetçi idealler ve kendini gizleme kaçınmayı teşvik ederken, ruminasyon umutsuzluğun devam etmesine neden olur. Bu gözden geçirme çalışmasında belirtilen değişkenler (benlik korkusu, mükemmeliyetçilik ve ruminasyon), bu değişkenlerin OKB'deki yaygınlığı, OKB hastalarının günlük yaşantılarına, rahatsızlıklarına ve tedavi süreçlerine olan etkileri kapsamlı bir şekilde ele alınmıştır.

Anahtar sözcükler: Obsesif-kompulsif bozukluk, benlik kavramı, mükemmeliyetçilik, ruh sağlığı

Introduction

Obsessive-Compulsive Disorder (OCD) is a highly prevalent condition, with a global prevalence rate of approximately 1% (Sassano-Higgins and Pato 2015, Golden Steps 2024), and has opened the door for a wide range of research. Typically, research is conducted to understand the biological, psychological, and social underlying mechanisms of OCD, as well as to explore its comorbidity, the complications, and the effectiveness of treatment methods (Blier and de Montigny 1998, Foa and McLean 2016, Del Casale et al. 2019, Bijanki et al. 2021).

OCD has been extensively studied in terms of its neurobiological, cognitive, and behavioral mechanisms (Blier and de Montigny 1998, Foa and McLean 2016). However, fewer studies have focused on the lived experiences of individuals with OCD, including the emotional distress caused by intrusive thoughts, the stigma associated with the disorder, and the impact of compulsions on daily functioning (Bhattacharya and Singh 2015, Jaeger et al. 2021). Understanding these challenges is essential for improving therapeutic interventions and addressing barriers to treatment-seeking.

Recent research emphasizes the significance of trans-diagnostic factors in understanding and treating the distress experienced by individuals with OCD. Fear of self, perfectionism, and rumination are three cognitive-affective constructs that have been independently linked to OCD (Frost and Steketee 1997, Ferrier and Brewin 2005, Wahl et al. 2011), yet their interplay remains under-explored. These variables share common mechanisms, such as heightened self-evaluative processes, maladaptive cognitive styles, and difficulties in emotional regulation, which may contribute to the onset and maintenance of OCD symptoms (Aardema et al. 2013, Melli et al. 2016, Raines et al. 2017). While perfectionism is associated with rigid standards and intolerance of uncertainty (Martinelli et al. 2014), fear of self amplifies distress related to intrusive thoughts (Aardema et al. 2013), and rumination sustains obsessive concerns by reinforcing negative self-perceptions (Wang et al. 2021). Given their overlapping cognitive and emotional pathways, it is crucial to examine these factors together to better understand their combined impact on OCD. Understanding whether they interact synergistically or function as independent maintaining factors can have significant implications for treatment. For instance, cognitive-behavioral interventions targeting maladaptive perfectionism or rumination may be more effective if tailored to address patients' underlying fear of self (Hood and Antony 2016, Pinto et al. 2017).

Therefore, this review aims to synthesize existing findings on these three constructs within the OCD framework, clarify their interrelations, and explore their implications for clinical research and intervention strategies. This paper focuses on unfolding some of the psychological and social struggles of individuals with OCD by concentrating on the role of fear of self, perfectionism, and rumination, besides discussing some of the disorder's treatment methods.

Definition and Prevalence of OCD

OCD is a chronic psychological disorder, classified in the Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5-TR) under the category of Obsessive-Compulsive and Related Disorders (OCD) alongside body dysmorphic disorder, hoarding disorder, trichotillomania and more (APA 2013). Individuals with OCD experience a set of intrusions, or undesirable thoughts, images, or urges, that provoke anxiety. These intrusions, also referred to as obsessions, are followed by compulsions and are a set of actions conducted by the individual, aiming for a brief relief from the anxiety of the obsessions (APA 2013). Unfortunately, the compulsions conducted after the obsessions direct individuals toward a never-ending vicious circle of thoughts, actions, and brief relief, leading to the need to receive professional help (APA 2013). OCD was previously thought to be a rare disorder, however, recent research revealed that it is quite common, with a prevalence of 1% globally as of 2024. This percentage equals approximately 70 million individuals worldwide (Golden Steps 2024). Moreover, OCD's onset is usually during puberty, and women are more reported to have OCD symptoms, although men have an earlier onset (Sassano-Higgins and Pato 2015). Furthermore, OCD was classified by the World Health Organization (WHO) among the 10 most handicapping disorders because of the incapability of earning a stable income and having a low standard

of living (Veale and Roberts 2014). OCD has been divided into various subtypes, the main four are cleaning (contamination/cleaning), symmetry (symmetry/ordering), forbidden thoughts (aggressive/sexual/religious), and harm (such as the fear of harming others or oneself).

Psychological, Social, and Treatment Landscape of OCD

OCD extends far beyond intrusive thoughts and compulsive behaviors; it deeply impacts the daily lives of individuals diagnosed with the condition. The disorder is associated with emotional distress, social difficulties, and disruptions in personal and professional life, making it one of the most impairing psychiatric conditions (Veale and Roberts 2014). While research has extensively examined the biological and cognitive underpinnings of OCD, less attention has been given to the real-life challenges that individuals face. These difficulties, ranging from self-perception issues to strained relationships, can influence treatment outcomes and quality of life. Understanding these broader struggles is essential for identifying trans-diagnostic factors that may maintain OCD symptoms and complicate recovery.

OCD, like various disorders, causes distress and alters patients' lives and the lives of the surrounding people (Riggs et al. 1992, Steketee et al. 1998, Pallanti et al. 2011, Ociskova et al. 2013, Jaeger et al. 2021). Psychologically, OCD patients are challenged with obsessions and feelings of shame (Jaeger et al. 2021). Jaeger et al. (2021) explained that these patients try to hide their symptoms and avoid treatment because of the self-conflicting nature of intrusive thoughts. For example, Jaeger et al. (2021) clarify that individuals evaluate themselves and differentiate between what is socially acceptable and what is not, leading them to conceal their thoughts, actions, or feelings that seem socially inappropriate and, eventually, avoiding treatment. Additionally, Laving et al. (2023) highlighted that shame acts as a barrier to seeking treatment. Besides shame, it was revealed that OCD patients struggle with feelings of isolation, dissimilarity, inability to receive unconditional love and be authentic to themselves, feeling powerless, as well as guilt (Bhattacharya and Singh 2015). Bhattacharya and Singh (2015) interviewed four OCD patients, and from the interviews they concluded that those individuals feel a disconnection between themselves and their loved ones, feelings of guilt and blame themselves for their disorder, as well as being unable to accept themselves as they are. Besides that, OCD symptoms can be very distressing. With contamination OCD, for example, it was revealed that individuals with this type of OCD experience uncomfortable feelings of internal dirtiness, leading to an impulse to wash (Coughtrey et al. 2012).

Besides the psychological problems assessed, OCD patients have several underlying social issues that, unfortunately, change the course of treatment and the likelihood of recovery. For example, many OCD patients struggle with their social relations (Riggs et al. 1992, Renshaw et al. 2012). In marital relationships, for example, subjects with OCD reported feelings of distress (Kasalova et al. 2020). Additionally, in the study by Riggs et al. (1992), participants reported similarly that they experience feelings of marital dissatisfaction compared to individuals with major depressive disorder. Nevertheless, OCD treatment was helpful in overcoming this issue and increase marital satisfaction, emphasizing the importance of treatment for OCD patients. Furthermore, it was found that among OCD patients, social adjustment was shown to be lacking, particularly when it comes to social, leisure, family, and marital role domains. This issue possibly worsens symptoms (Rosa et al. 2012). Besides that, in Renshaw et al. (2012) study, 72% of the participants reported that OCD affected their social functioning. Similarly, Pinto et al. (2006) found that OCD leads to severe social dysfunction.

From another perspective, the families' reactions to their family member's OCD symptoms are likewise crucial and lead to severe distress (Steketee et al. 1998). Criticism, hostility, and over-involvement, the elements of expressed emotion, were studied in OCD research (Steketee et al. 1998). For instance, reports showed that families expressing anger and criticism contribute to worsening OCD treatment because of increased stress (Steketee et al. 1998). Unfortunately, these issues and the ones discussed above, and possibly many more uncovered problems, lead OCD-diagnosed individuals to drop out of treatment and, sometimes suicide (Pallanti et al. 2011, Stein et al. 2019).

In addition to the social problems OCD patients experience, the high comorbidity of the disorder is also a crucial point that affects the continuity of treatment (Pallanti et al. 2011, Stein et al. 2019). OCD is a highly

comorbid disorder, and one particular category of disorders OCD is strongly associated with is anxiety disorders (Stein et al. 2019). Anxiety disorders such as panic disorder (PD), Generalized Anxiety Disorder (GAD), and Post-Traumatic Stress Disorder (PTSD) are often found to be associated with OCD, with a percentage of comorbidity of 13% to 56% with PD and 30% with GAD (Pallanti et al. 2011). Besides anxiety disorders, OCD is closely linked with many other disorders, such as mood disorders, with a comorbidity rate ranging from 19 to 90%. Besides that, Major Depressive Disorder (MDD) is 10 times more prevalent in individuals with OCD. Moreover, OCD is comorbid with psychotic disorders, such as schizophrenia, with 8 to 26% of patients with schizophrenia meeting the DSM criteria for OCD. Furthermore, OCD was also found to be interrelated with neurological diseases such as epilepsy, with a percentage of 10 to 22 (Pallanti et al. 2011)

Another factor that affects OCD patients' treatment is stigma. Unfortunately, individuals with mental health issues are often labeled and discriminated against (Ociskova et al. 2013). This labeling, possibly because of stereotyping, differentiating, and portraying the ingroup members as good and the outgroup members as bad (Hinshaw and Stier 2008), has a noteworthy negative effect on the stigmatized. Due to stigma, patients are avoided and perceived as dangerous, which leads to losing their status in society (Link and Phelan 2001). Individuals with OCD fear being stigmatized, like individuals with other disorders, and being labeled as mentally ill. Regrettably, these individuals avoid seeking help and treatment, occasionally for that sole reason, leading to depression symptoms, consumption of substances, and acquiring hostile emotions (Ociskova et al. 2013).

Exposure and response prevention (ERP) and pharmacotherapy are regarded as effective treatment methods for OCD (Ferrando and Salai 2021). Still, dropping out of treatment is highly common (Pinto et al. 2017), which is explained by the fact that patients might find the ERP process and side effects of distressing medications (Wheaton et al. 2016). Jaeger and colleagues (2021) further indicate that factors playing a role in the mechanism of OCD might be responsible for patients' reluctance to attend or drop out of treatment, due to feelings of shame, an inclination to conceal their obsessive thoughts, and fear of stigmatization. When there are comorbid problems, the situation becomes even more complicated, and the existing treatment methods might fail to correspond to the varying needs of the patients (Pinto et al. 2017). Taken together, these studies highlight the need to understand the heterogeneity of OCD, the maintaining factors, and alternative approaches in treatment.

Regrettably, patients' views on the disorder itself may aggravate their OCD symptoms, leading to more distress and, sometimes suicide (Angelakis et al. 2016, Fernández de la Cruz et al. 2017, Pellegrini et al. 2020). Suicidality was found to be quite high among individuals with OCD, possibly due to comorbidity, severe depression, severe anxiety, and hopelessness (Angelakis et al. 2016). Moreover, Fernández de la Cruz et al. (2017) found that, out of 36,788 OCD patients in Sweden, 545 committed suicide, and 4,297 individuals attempted suicide between the years 1969 and 2013. Furthermore, in their study, Pellegrini et al. (2020) analyzed 61 OCD-conducted studies, identifying 52 of them that investigated OCD and suicide. They reported that OCD patients have a significant suicide risk, with at least 1 out of 10 patients attempting suicide, and almost half of individuals having suicidal thoughts. Because of the gravity of the situation, it is crucial to conduct research regarding OCD and related variables.

In short, OCD is a complex and deeply distressing disorder that affects not only the individual's psychological well-being but also their social and occupational functioning. Many individuals struggle with feelings of shame, self-doubt, and stigma, which can lead to avoidance behaviors, reluctance to seek help, and high treatment dropout rates (Pinto et al. 2017, Jaeger et al. 2021). Standard treatment approaches, such as ERP, are effective but are often perceived as distressing, contributing to early discontinuation. Given these challenges, it is crucial to explore trans-diagnostic factors that may underlie these difficulties. Cognitive and emotional processes, such as fear of self, perfectionism, and rumination, may not only contribute to OCD symptoms but also influence treatment engagement and persistence. By examining these factors, we can acquire a deeper understanding of the obstacles individuals with OCD face and explore new ways to enhance treatment adherence and outcomes.

OCD Related Trans-diagnostic Variables

Fear of Self

A topic widely discussed in psychology, mainly social psychology, is self-concept. Shavelson et al. (1976) define self-concept as the perception of ourselves that we form throughout the experiences we encounter in our environment, mainly impacted by reinforcements, life partners, and our evaluation of our behavior. The research conducted on self-concept unveiled the complication of our self-knowledge, referring to our perception of our thoughts, feelings, and behavior (Vazire and Carlson 2010), and a specific area under self-knowledge is labeled as "possible selves" (Markus and Nurius 1986).

Markus and Nurius (1986) define possible selves as a type of self-knowledge characterized by the individual's thinking of who they may become in the future. They also discuss that possible selves can be the selves we would like to become, and the selves we are afraid to become, both of which, multiple subcategories could be included such as "successful self", "rich self", or "unemployed self", and "depressed self". These possible selves may result from prior social comparisons between an individual and others' self-knowledge, however, the kind of possible self stems from the environment and history of the individual (Markus and Nurius 1986).

Vignoles et al. (2008) examined the reasons by which we desire some possible future selves and fear others, using the identity motives concept. They found that individuals desire, and fear, some possible future selves to protect their self-esteem, influence their environment, give their lives meaning, have a continuous identity over time, and be accepted by their social circles (Vignoles et al. 2008). Besides, Oyserman and Markus (1990) discovered that between delinquent and non-delinquent adolescents, there is a difference in feared possible selves. The delinquent adolescents feared possible selves revolved around terms such as "crime", "drugs", "abuse", and similar connotations, whereas the non-delinquent adolescents feared possible selves were more diverse focusing on finances, such as "poverty", "unemployment", "academic failure", as well as mental states such as "depression", and "paranoia" etc. Feared possible selves, or fear of self has recently been found related to OCD.

Fear of self is a relatively new concept that has been recently linked with OCD (Ferrier and Brewin 2005, Aardema et al. 2013, Melli et al. 2016, Yücel 2023). Ferrier and Brewin (2005), for example, conducted a study to understand whether OCD intrusions lead to fear of self. They concluded that OCD patients hold more negative views about themselves compared to other groups. With further elaboration, the researchers found that their OCD patients' group demonstrated traits of danger to self and others because of being 'bad', or 'immoral' (Ferrier and Brewin 2005). Similarly, Aardema et al. (2013) developed the Fear-of-Self Questionnaire (FSQ) and assessed its validity. They provided sets of psychological measures, including the FSQ, to their participants. The statistical analyses conducted demonstrated a strong correlation between fear of self and obsessive-compulsive (OC) symptoms, particularly obsessions. Furthermore, the results indicated that fear of self predicted certain cognitive patterns associated with OC symptoms, such as heightened threat perception and perfectionism (Aardema et al. 2013). Correspondingly, Melli et al. (2016) assessed the correlation between fear of self and OCD, they found that OCD and fear of self are highly linked, especially with the unacceptable thoughts section in the OCD questionnaire. Additionally, they concluded that fear of self can be considered a predictive factor of unacceptable thoughts in OCD, along with depression, GAD, and obsessions (Melli et al. 2016). In her review, Yücel (2023) discusses the concept of fear of self and its relationship with OCD, highlighting local research conducted in Turkey on this topic. One example was Evliyaoğlu's (2019) examination of mental contamination and fear of self, linked to OCD. The results showed that, after a kissing scenario, individuals who have higher levels of fear of self seem to experience more mental contamination, internal, and external unpleasant feelings. Moreover, she explained that concerning OCD, the intense inclination to wash and clean is to be considered aligned with the fear of self's definition (Evliyaoğlu 2019). Furthermore, Yücel (2023) also mentions Devrim-Ader's (2019) research, which detected a significant correlation between fear of self and the concepts of unacceptable thoughts, harm, and sexual ideas. The researcher explains that it becomes particularly evident when the person's thoughts are considered 'bad' and they are afraid of whether they will act upon them (Devrim-Ader

2019). Understanding the connection between fear of self and OCD is crucial to treating OCD patients (Aardema et al. 2019). Aardema et al. (2019) conducted a study to understand the impact of changes in fear of self perceptions on OCD patients in therapy. They found that fear of self perceptions have an important role in maintaining the disorder, and that treatment helped reduce the OCD symptoms and fear of self thoughts.

Perfectionism

Researchers debated the definition of perfectionism for generations. Horney (1950) described perfectionists as individuals who create an image of a perfect being. This thinking process results from inner stress, which leads the person to experience a form of alienation from themselves, subsequently shaping themselves using a rigid system to become perfect. On the other hand, Hollender (1965) disagreed with Horney's explanation, defining perfectionism as an aspiration to perform, and performance, rather than a thinking process or the creation of an image of a perfect individual. Hollender explains that perfectionists seek acceptance from others as a primary goal. Nevertheless, Flett and Hewitt (2002) provided a definition of perfectionism arranged from multiple conceptualizations. They define perfectionism as a personality trait that is categorized by a strong pursuit of flawlessness and perfection. This pursuit is based on self-criticism and placing high standards to reach perfection in all categories.

Flett and Hewitt (2002) described the conceptualization of perfectionism as complex and clarified that perfectionism should be treated as multidimensional because it includes personal and interpersonal features. Moreover, from their research, they described how perfectionism is divided into two subcategories of adaptive (normal) and maladaptive (neurotic). Lo and Abbott (2013) review the differences between the two subcategories throughout the literature, and they explain that adaptive perfectionism is related to positive affect and is unrelated to depression, compared to maladaptive perfectionism, which is related to negative affect and depression. Furthermore, individuals with adaptive perfectionism showed a more substantial degree of self-efficacy, positive well-being, self-esteem, etc., compared to individuals with maladaptive perfectionism who reported higher levels of feelings of inferiority, anxiety, and low self-esteem (Lo and Abbott 2013).

Perfectionism and OCD are highly related (Frost and Steketee 1997, Wu and Cortesi 2009, Martinelli et al. 2014). For instance, Frost and Steketee (1997) compared the level of perfectionism between OCD and agoraphobia patients. In their study, Frost and Steketee assessed their subjects' perfectionism levels using the Frost Multidimensional Perfectionism Scale (FMPS) (Frost et al. 1990). Results revealed that patients with OCD showed higher scores on the perfectionism scale's total score compared to the control group. Moreover, the OCD-diagnosed patients scored higher compared to the control group on the subscales of 'concern over mistakes' and 'doubts about actions'. Furthermore, perfectionism scores were also high in individuals with agoraphobia compared to the control group. Similarly, Wu and Cortesi (2009) investigated the relationship between perfectionism and OCD. They asked psychology students to fill out perfectionism and OCD surveys in two groups across two studies: one group completed multiple OCD scales, and the other filled out only the FMPS (Frost et al. 1990). The statistical analysis revealed that, firstly, perfectionism was distinctively correlated with OC symptoms after depression was controlled, meaning that depression by itself does not fully explain the relation between OCD and perfectionism. Furthermore, OC symptoms were correlated with maladaptive perfectionism, thus, when OC symptoms increase, maladaptive perfectionism will increase as well, and vice versa. An additional finding was that the relation between perfectionism and OC symptoms is much stronger than the relation between perfectionism and depression, although it is still noteworthy. In another study, Martinelli et al. (2014) examined whether dimensions of perfectionism can be predictors of OCD. From the data analysis, it was shown that initially, the dimension of perfectionism, Doubts about Actions (DA) can predict OCD-checking behavior. Moreover, the Doubts about Actions (DA) dimension was also highly correlated with the total OCD scale score. Perfectionism is a strongly correlated variable with OCD, so it is important to consider it while treating OCD patients (Pinto et al. 2017). Pinto et al. (2017) discuss the importance of considering perfectionism in OCD treatment, as it overlaps with the symptoms and hinders treatment.

Rumination

According to the response styles theory of Nolen-Hoeksema (1991), rumination defines a response style to depressed mood characterized by repetition and passive focus on the distressing symptoms, and what possibly caused and resulted from the symptoms in question (Nolen-Hoeksema et al. 2008). Additionally, rumination in general as per Lyubomirsky and Nolen-Hoeksema (1993), is a term referring to the coping mechanism performed by individuals with negative moods. The issue with rumination is that it does not direct individuals to alter their symptoms positively, instead, it keeps them focused on their issues without actively trying to solve them. Furthermore, ruminative thoughts in people with depression are generally negative, and various research studies have found a correlation between rumination and maladaptive cognitive styles, such as dysfunctional attitudes, hopelessness, and pessimism (Nolen-Hoeksema et al. 2008). Moreover, Treynor et al. (2003) identified subtypes of rumination, which include brooding and reflection. Brooding refers to the moody pondering over oneself or the events experienced, it involves thoughts such as "What am I doing to deserve this?", "Why do I have problems other people don't have?", thoughts about wishing the situation had gone better, etc. On the other hand, reflection is the individual's attempt to solve their issues by themselves and trying to overcome their problems by contemplation (Treynor et al. 2003). According to Bastin et al. (2014) review of the literature, brooding seems to predict the escalation of symptoms of depression, however, reflection seems to be a protective factor from depression. Rumination is a topic usually discussed and studied with depression, nevertheless, rumination has been proven to be related to OCD.

Rumination was found linked with OCD in multiple research (Watkins 2009, Wahl et al. 2011, Raines et al. 2017, Wang et al. 2021). It was found that the more individuals with OCD ruminate, the stronger their OC symptoms get. In other words, rumination can worsen OC symptoms such as checking behaviors, washing behaviors, and so on. In reverse order, OC symptoms can worsen rumination. As a result of the distressing obsessions and compulsions, individuals with OCD who have an increase in their OC symptoms may show higher levels of rumination as a response to their distressing situation (Watkins 2009, Wahl et al. 2011, Raines et al. 2017, Wang et al. 2021).

For example, Watkins (2009) conducted a study with 116 unipolar mood disorder patients to investigate the possible trans-diagnostic role of rumination leading to comorbidity, in addition to exploring whether the literature findings with non-clinical samples could be replicated with a clinical sample. Watkins uncovered the significant correlation between the brooding aspect of rumination and the diagnosis of OCD as well as GAD (Generalized Anxiety Disorder) despite depression control, concluding that an increase in the brooding aspect of rumination is associated with an increase in the possibility of a diagnosis of comorbid OCD and GAD.

Correspondingly, Wahl et al. (2011) investigated the possible relationship between ruminative thinking style (RTS) and obsessive-compulsive (OC) symptoms in two non-clinical samples of students. They found that RTS and OC symptom severity are positively correlated at a moderate to high level, and additionally, between RTS and obsessive rumination as well. Furthermore, they detected a weak correlation between RTS and OC subcategories of impulses: washing, checking, and precision. They explained that the more individuals ruminate in response to a distressing situation, the stronger their OC symptoms and obsessive rumination are. Despite that, Wahl et al. (2011) also realized that depressive symptoms alter this positive relationship. They noticed that when depressive symptoms were controlled, the positive correlation between RTS and OC symptoms decreased in strength, suggesting the role of depression in this manner. However, the weak correlation between RTS and the remaining OC subcategories remained significant despite depression control, and the correlation between RTS and obsessive rumination remained significant.

Similarly, Raines et al. (2017) examined the role of rumination in OCD symptoms. In their study with 105 individuals receiving psychological treatment and/or individuals participating in Florida State University's health clinic's research, Raines et al. identified a significant correlation between rumination and the unacceptable thoughts/neutralizing compulsions section of OCD. Inconsistent with Wahl et al. (2011)

research, Raines et al. did not detect a noteworthy correlation between rumination and the remaining OC symptom categories within the scale.

Another research proving the relationship between rumination and OCD is Wang et al. (2021)'s study. In their experiment, including OCD-diagnosed individuals, they inspected the possible relationship between the following variables: negative affect (i.e., depression and anxiety), mind-wandering, rumination, and OC symptoms. Moreover, they also define mind-wandering as a form of spontaneous, less restricted, and more result-driven thought that differs from rumination and obsessive thought but is closely related to OC symptoms. Results showed that individuals diagnosed with OCD portrayed stronger negative affect than the control group. Furthermore, mind-wandering as well as rumination showed a positive, significant relation with OC symptoms. In addition, from Wang et al.'s (2021) analyses, they concluded that mind-wandering had a strong, direct, positive relationship with OC symptoms. Likewise, rumination and negative affect were found to have a serial mediating effect (where multiple mediators are involved, following a specific order) on mind-wandering and OC symptoms' correlation. Concluding that the level of rumination and negative affect shapes the impact of mind-wandering on OC symptoms.

Discussion

OCD is highly comorbid, especially with anxiety and mood disorders (Pallanti et al. 2011). Moreover, OCD diagnosed individuals seem to have difficulties in their social relations such as in marital relationships, as well as social adjustment (Riggs et al. 1992). Regrettably, individuals who display OC symptoms may avoid receiving professional help because of fear of being stigmatized and labeled, leading to multiple issues such as struggling to have a stable income (Ociskova et al. 2013). Such problems may lead several individuals to end their lives, statistically speaking, out of 36,788 patients with OCD, 545 committed, and 4,297 individuals attempted suicide in Sweden between 1969 and 2013 (Fernández de la Cruz et al. 2017). This shows the gravity of the situation and should encourage researchers to study OCD and related variables to enhance the treatment provided for OCD patients, raise awareness, and reduce stigma. As a part of this review, we unfolded the relationship between OCD and three variables: fear of self, perfectionism, and rumination.

Fear of self, perfectionism, and rumination are interconnected variables with OCD (Frost and Steketee 1997, Ferrier and Brewin 2005, Raines et al. 2017). Fear of self was found predictor of perfectionism, which is an OCD-related variable (Aardema et al. 2013). Similarly, perfectionism leads to vulnerability to depression, which results in rumination (Hewitt et al. 1996). The choice of analyzing fear of self, perfectionism, and rumination within the scope of OCD is a result of the continuous existence of these variables in OCD research. And although depression is apparent as a linking factor between those variables, knowing that depression is one of the disorders OCD is highly comorbid with, we still aimed to understand how they interact individually with OCD without the influence of depression. It was found that individually, these variables are highly related to OCD (Frost and Steketee 1997, Ferrier and Brewin 2005, Watkins 2009, Wu and Cortesi 2009, Wahl et al. 2011, Aardema et al. 2013, Martinelli et al. 2014, Melli et al. 2016, Raines et al. 2017, Wang et al. 2021).

Fear of self, for example, was found to possibly predict OCD (Aardema et al. 2013). Researchers infer the cause of a simple reaction to self-perception. The authors discuss that if an individual views themselves as immoral or insane, they naturally will be more conscious of their thoughts, leading to obsessions and intrusions. Additionally, perfectionism was reported to be highly correlated with OCD (Frost and Steketee 1997). Frost and Steketee (1997) explore this correlation, discussing that perfectionism may be a "necessary condition" in developing disorders. Finally, rumination was shown to worsen OCD symptoms (Wahl et al. 2011). The author hypothesizes that the cognitive model of OCD may use ruminative thinking style as a coping mechanism for obsessions. All these inferences and hypotheses may or may not explain the relation between OCD and the variables above, nevertheless, future experimental studies are encouraged to state the potential causal relationships.

According to the Cognitive-Behavioral Theory of OCD, the misinterpretation of intrusive thoughts and appraisals of personal responsibility are the principal determining factors in the development of

psychopathological conditions (Godwin et al. 2020). This approach, also referred to as the Appraisal-Based Model, has recently been challenged by studies emphasizing the role of self-related inferences in the development and maintenance of OCD (Godwin et al. 2020, Jaeger et al. 2021, Myers et al. 2024). From the perspective of the Inference-Based Model, the patient perceives intrusive thoughts as a representation of the negative aspects of the self (Aardema and O'Connor 2007). Consequently, individuals often experience doubt or fear regarding their attributes (Aardema et al. 2013, Aardema et al. 2019), and they typically conceal these negative aspects from others (Jaeger et al. 2021). In their systematic review, Jaeger et al. (2021) asserted that fear of self and the tendency to conceal obsessive beliefs might prevent patients with OCD from applying for treatment, engaging in the therapeutic process, and the normalization of intrusive thoughts.

Existing research recognizes the critical role played by the fear of self in the mechanisms of OCD. However, few writers have been able to draw on systematic research into handling fear of self in psychotherapy. One of the systematic studies on fear of self in the treatment process was reported by Aardema et al. in 2019. The results revealed that a decrease in fear of self was related to a decrease in repugnant obsessions. Myers and colleagues (2024) emphasize that the evidence for the role of fear of self in various domains of OCD is not conclusive yet, and that Appraisal and Inference-Based Models might be efficient for different domains of OCD. However, considering the accumulating evidence about the association between fear of self and symptom severity, it is noteworthy that further work is needed to fully understand the implications of more flexible treatment approaches that consider the heterogeneity of OCD and the specific characteristics of patients (Myers et al. 2024). In the same vein, Godwin et al. (2020) argue that appraisal-based and inference-based models should be integrated. Their systematic review demonstrated that the Inference-Based Model is particularly helpful for patients who are resistant to treatment or have low insight. Therefore, when the symptoms of OCD are associated with negative perceptions of the self, handling these inferences in the therapeutic process would provide positive outcomes (Godwin et al. 2020).

Almost every paper that has been written on the heterogeneity of OCD includes a section discussing the need for integrated and more flexible treatment approaches that can be tailored, considering the needs of patients. For example, Pinto et al. (2017) highlighted that perfectionism might interfere with the treatment process of OCD and discussed the need for treatment approaches that integrate perfectionism and OCD. Perfectionistic patients might be striving to achieve the perfect outcome from treatment, avoid treatment-related tasks, and be unable to generalize their achievements to other tasks (Pinto et al. 2017). Similarly, Hood and Antony (2016) proposed that cognitive strategies to challenge perfectionistic attitudes might be added to the ERP protocol.

Another factor that interferes with the OCD treatment process and reflects the heterogeneous nature of the disorder is rumination. Handling trans-diagnostic factors, such as perfectionism and rumination, in treatment is argued to be preventative for various comorbid problems (Raines et al. 2017). Overall, the heterogeneous nature of OCD is an intriguing issue that could be explored in further research. If the debate is to be moved forward, it is possible to improve the effectiveness of treatment methods, reduce dropout rates, and tailor treatment approaches, considering the specific needs of patients (Myers et al. 2024).

Conclusion

OCD is a challenging disorder with a considerable number of treatment dropouts, possibly due to fear of being stigmatized, feelings of shame, and distressful medication side effects. Moreover, the variables of fear of self, perfectionism, and rumination play a noteworthy role in worsening OCD symptoms, as these three variables revolve around negative thoughts, such as fear, criticism, and regret. Further experimental studies are encouraged to claim the possible causal relationship between the variables discussed. It is hoped that this research enlightens the difficulties OCD-diagnosed individuals go through, possibly helping psychotherapy approaches to handle such a difficult disorder and create medications with minimal side effects, in addition to encouraging future research to be conducted with the variables highlighted in this review.

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