



Relationship Obsessive Compulsive Disorder: A Systematic Review

Romantik İlişki İçerikli Obsesif Kompulsif Bozukluk: Sistematik Derleme

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ABSTRACT

Obsessive Compulsive Disorder (OCD) is a disorder characterized by obsessions and compulsions and negatively affects the functionality of individuals. OCD symptoms with romantic relationship content have been investigated in the literature for the last 10 years. OCD symptoms with romantic relationship content are divided into two types: relationship-centered and partner-focused. The aim of this systematic review was to examine the relationship between OCD symptoms with romantic relationship content and individual and relational variables. Studies in the literature were reviewed in detail in order to evaluate the results regarding the relationship between OCD symptoms in romantic relationships and individual and relational factors. In the national and international literature, no systematic review study on this subject was found. Accordingly, studies published between 2012 and 2022 in internationally accepted electronic databases using the terms "relationship obsessive compulsive disorder", "relationship centered obsessive compulsive symptoms" and "partner focused obsessive compulsive symptoms" were reviewed. As a result of the search, according to the inclusion criteria, 12 empirical studies on the relationship between OCD in romantic relationships and individual and relational variables with full-text access and written in English were analyzed. The methodological characteristics and results of the 12 included studies are presented in this systematic review study. The results of the studies suggest that symptoms related to romantic relationships negatively affect the functioning of individuals similar to OCD. When the variables associated with obsessive-compulsive symptoms in romantic relationships are analyzed in individual and relational context, they are related to many factors such as psychopathologies, attachment styles, self and relationship satisfaction. In this context, there is a need for empirical studies carried out with clinical samples, exploring the effectiveness of psychotherapy and cross-cultural studies on obsessive-compulsive symptoms related to romantic relationships.

Keywords: Romantic relationship, obsessive compulsive disorder, systematic review

ÖZ

Obsesif Kompulsif Bozukluk (OKB) obsesyonlar ve kompulsiyonlarla karakterize olan ve bireylerin işlevselliğini olumsuz yönde etkilediği bilinen bir bozukluktur. Alanyazında son 10 yıldır romantik ilişki içeriğine sahip OKB semptomları araştırılmaya başlanmıştır. Romantik ilişki içerikli OKB semptomları, ilişki merkezli ve partner odaklı olmak üzere iki türe ayrılmaktadır. Bu sistematik gözden geçirme çalışmasında, romantik ilişki içerikli OKB semptomlarının bireysel ve ilişkisel değişkenlerle ilişkilerinin incelenmesi amaçlanmıştır. Romantik ilişki içerikli OKB semptomlarının bireysel ve ilişkisel faktörlerle ilişkilerine ilişkin sonuçları değerlendirmek amacıyla alanyazındaki çalışmalar detaylı bir şekilde taranmıştır. Ulusal ve uluslararası alanyazında bu konuyla ilgili yayınlanmış bir sistematik derleme çalışmasına rastlanılmamıştır. Bu doğrultuda, "relationship obsessive compulsive disorder", "relationship centered obsessive compulsive symptoms" ve "partner focused obsessive compulsive symptoms" terimleri kullanılarak uluslararası kabul gören elektronik veri tabanlarında 2012-2022 yılları arasında yayınlanmış olan çalışmalar taranmıştır. Yapılan tarama sonucunda dahil etme kriterlerine göre romantik ilişki içerikli OKB ile bireysel ve ilişkisel değişkenlerin ilişkilerine dair tam metin erişimi sağlanabilen ve yazım dili İngilizce olan görgül 12 araştırma g incelenmiştir. Dahil edilen 12 araştırmanın yöntemsel özellikleri ve sonuçlarına ilişkin bilgiler bu sistematik derleme çalışmasında sunulmuştur. Araştırmaların sonuçlarına göre, romantik ilişki içerikli semptomlar OKB gibi bireylerin işlevselliğini olumsuz yönde etkilemektedir. Romantik ilişki içerikli obsesif kompulsif semptomlarla ilişkili değişkenlere bireysel ve ilişkisel bağlamda bakıldığında psikopatolojiler, bağlanma stilleri, benlik ve ilişki doyumu gibi birçok faktörle ilişkilidir. Bu bağlamda romantik ilişki içerikli obsesif kompulsif semptomlara ilişkin klinik örneklerle yürütülen, psikoterapi etkililiğinin incelendiği ve kültürlerarası yürütülen görgül araştırmalara ihtiyaç olduğu görülmektedir.

Anahtar sözcükler: Romantik ilişki, obsesif kompulsif bozukluk, sistematik derleme

Introduction

Obsessive-Compulsive Disorder (OCD), which is included in the category of Obsessive-Compulsive and related disorders in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), is defined as a disorder characterized by obsessions and compulsions (APA 2013). Obsessions are characterized by continuous and recurring thoughts, impulses or images (Rachman and De Silva 2009). Obsessions, arising unexpectedly in the mind (intrusive) and causing distress and anxiety in individuals, often show ego-dystonic characteristics that contradict the thought-value systems of individuals (Porgalı-Zayman 2016, Steketee 1993). Compulsions, on the other hand, are defined as mental efforts or behaviors that the person feels obliged to continue pursuing within certain rules in order to reduce the distress and anxiety caused by obsessions and to prevent feared consequences (Abramowitz et al. 2008, APA 2013). Individuals attempt to ignore, suppress or neutralize obsessions through other thoughts or behaviors in order to reduce or control the anxiety (Salkovskis 1985, APA 2013).

While the 12-month prevalence of OCD is 1.1-1.8% worldwide (APA 2013), Çilli et al. (2004) found the prevalence rate of OCD to be 3% within a 12-month period in Turkey. In addition, OCD can be comorbid with many psychiatric disorders (Stengler-Wenzke et al. 2006). The most common comorbidity of OCD is major depressive disorder (Rasmussen and Eisen 1989, Fireman et al. 2001, Demet et al. 2005, Osland et al. 2018). However, this disorder significantly affects functionality by causing impairments in various areas of an individual's life including family, relationships and work (Morrison 2017). This decrease in functionality varies depending on some factors such as socioeconomic status of individuals, severity of the disorder, and comorbidity (Heyman et al. 2001).

OCD has a heterogeneous structure with different symptom presentations. For this reason, people seeking treatment appear to have a clinical picture associated with different types of obsessive thoughts and compulsive behaviors. Although symptoms vary greatly from patient to patient, symptoms are commonly found to have the following contents: "controlling, contamination/contamination, organizing, harming/giving, religious and sexual" (McKay et al. 2004, Abramowitz et al. 2008, APA 2013). The variability of OCD symptoms and symptom content leads to the emergence of new symptom types as time passes. In recent years, relationships (with parent-child, god, mentor, romantic partner) have been investigated as a symptom content in the literature, and romantic relationships are one of these themes (Doron et al. 2012a, Doron et al. 2014a).

OCD with romantic relationship content is characterized by obsessions about the partner and the relationship itself and compulsive behaviors performed to reduce the anxiety related to these obsessions (Doron et al. 2014a). Obsessions with romantic relationship content are mostly in the form of thoughts, but they can also be seen as impulses (e.g., an impulse to leave the partner) or images (e.g., an image of the partner) (Doron et al. 2014a). In order to reduce the distress and anxiety caused by obsessions, compulsive behaviors such as repeatedly "checking" their feelings towards their partner, "comparing" their partner's characteristics or relationships with others' relationships or partners, "neutralizing" their partner by thinking about happy moments when they are with their partner, and "seeking reassurance/approval" from people around them about the validity of their relationship are observed (Doron et al. 2014a). The realization of these compulsions, which occur in a sudden and uncontrollable manner, lasts for more than a few hours during the day in people with symptoms (Doron et al. 2012a). There is no empirical research to determine the age of onset of these symptoms, which have an impact on the functionality of individuals, but clinical experience suggests that symptoms mostly occur in young adulthood (Doron et al. 2014b). Symptoms may persist as individuals engage in activities related to romantic relationships, and sometimes situations such as the decision to get married or the end of a relationship may trigger OCD symptoms related to romantic relationships. Clinical experiences have shown that people may avoid new relationships to refrain from re-experiencing symptoms, but there is no known study in the literature demonstrating the effects of symptoms on new relationships (Doron et al. 2014b). In addition, OCD symptoms with a romantic relationship content were found to have two different types as "romantic relationship-centered" and "partner-focused" as per clinical observations (Doron et al. 2012a, Doron et al. 2012b).

The presence of fear, doubt, conflicting feelings and questioning thoughts about the romantic relationship at the onset of relationships is considered natural (Brickman 1987, Doron et al. 2012a). However, intense and intrusive relationship-centered obsessive-compulsive symptoms, which include obsessive doubts and preoccupation about the individual's love for the partner, the partner's love for the individual, and the rightness of the relationship for the individual, are incompatible with the person's thoughts and values (e.g., the person is aware that his/her partner loves him/her but tries to be sure of this) and lead to impairment in functioning. In these aspects, it differs from the conflicting thoughts and feelings seen in the initial phase of romantic relationships (Doron et al. 2012a). Individuals exhibit compulsive behaviors such as approval seeking,

comparison, controlling, and neutralization (neutralization/neutralization) to reduce the obsessive anxiety. Doron et al. (2012a) reported that relationship-centered obsessive-compulsive symptoms have a negative relationship with relationship satisfaction and self-esteem. In addition, there is a positive and significant relationship with attachment styles (avoidant, anxious), psychopathologies (depression, anxiety), stress, obsessive beliefs and OCD symptoms.

In the partner-focused obsessive-compulsive symptom type, individuals have intense doubts and obsessive thoughts about their partner's intelligence, morality, emotional stability, professional competence, social skills or appearance. In addition, these obsessions are accompanied by compulsive behaviors such as comparison, reassurance seeking, neutralization or controlling (Doron et al. 2012b). Doron et al. (2012b) found that partner-focused symptoms had a negative relationship with relationship satisfaction and self-esteem, while attachment styles (avoidant, anxious), psychopathologies (depression, anxiety), stress, obsessive beliefs, OCD symptoms and relationship-centered obsessive-compulsive symptoms had a positive and significant relationship.

There is no known study on the effectiveness of pharmacotherapy on OCD symptoms related to romantic relationships (relationship-centered and partner-focused) (Doron et al. 2014a). Similarly, although there is no known efficacy study on the psychosocial treatment of OCD symptoms in romantic relationships, Cognitive Behavioral Therapy (CBT) is recommended for OCD. Treatment includes assessment, psychoeducation, identification of basic maintenance mechanisms and prevention of relapse (Doron et al. 2014a, Doron and Derby 2017). In addition, individuals' dysfunctional self-perceptions, maladaptive obsessive beliefs, attachment-related fears and defenses can also be studied. The use of cognitive-behavioral techniques such as Exposure and Response Prevention (ERP), cognitive restructuring and behavioral experiments contributes to the therapeutic process (Doron et al. 2014a, Doron and Derby 2017).

Due to the heterogeneous structure of OCD, it is known that understanding symptom manifestations is very important for diagnosis and treatment (Lochner and Stein 2003, De Mathis et al. 2011). However, when the studies are examined, there is no study on the effectiveness of psychotherapy yet and there are suggestions for the treatment of OCD with romantic relationship over existing OCD treatments (CBT, ERP) (Doron et al. 2014a, Doron and Derby 2017).

OCD symptoms related to romantic relationships have been studied in the international literature for the last 10 years, but it is a topic that has recently gained attention in the national literature. As a result of the review conducted by the authors for the scope of this study, it was observed that there were mostly thesis studies and a limited number of research articles in the Turkish literature (n=2). The aim of the present study is to systematically review the existing studies in order to determine the individual and relational variables associated with OCD symptoms in romantic relationships, which is a novel research topic in Turkey. Furthermore, the current study is expected to serve as a source for future studies to understand the nature of OCD symptoms in romantic relationships and the effectiveness of psychosocial treatment.

Method

Screening and Selection Process

This review study aimed to determine the individual and relational variables associated with OCD symptoms in romantic relationships. In this study, which was conducted according to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol (Moher et al. 2009) used in meta-analysis and systematic review studies, internationally recognized electronic databases such as EBSCH OHost, JSTOR, PubMed and ScienceDirect and Google Scholar were searched without any limitations. In this search, the terms "relationship obsessive compulsive disorder", "relationship centered obsessive compulsive symptoms", "romantic relationship centered obsessive compulsive symptoms" and "partner focused obsessive compulsive symptoms" were used in the time interval between March 2022 and April 2022. Since the first publications on the subject were made in 2012, the systematic review includes empirical studies covering the years between 2012 and 2022. Turkish publications were reviewed in detail before starting the systematic review study in order to examine whether there was a publication parallel to the subject of this study, and it was noted that there was a review study on the risk factors of OCD in romantic relationships (Akkaya and Yılmaz 2021). However, since there were no systematic review studies on the subject in either literature and there was a limited number of empirical studies in Turkish, the inclusion criteria for the study were as follows: examining OCD symptoms in romantic relationships, availability of full-text access, and being written in English. Studies and review studies examining OCD symptoms in other relationships (e.g., parent-child, god, mentor) were excluded.

In the current systematic review study, 88 studies were initially accessed. After excluding 33 identical studies published in different databases, 55 studies remained. According to the exclusion and inclusion criteria, 43 of these 55 studies were excluded. Most of the excluded studies were non-English language studies, but here they are detailed according to study types. Accordingly, one study was not published in English, 13 studies were thesis studies, two studies were case studies, three studies were review studies, four studies were scale development/adaptation studies and 20 studies were not related to OCD in romantic relationships. After excluding these studies, 12 studies that met the inclusion criteria were analyzed. The flow chart for the excluded and included articles is illustrated in Figure 1.

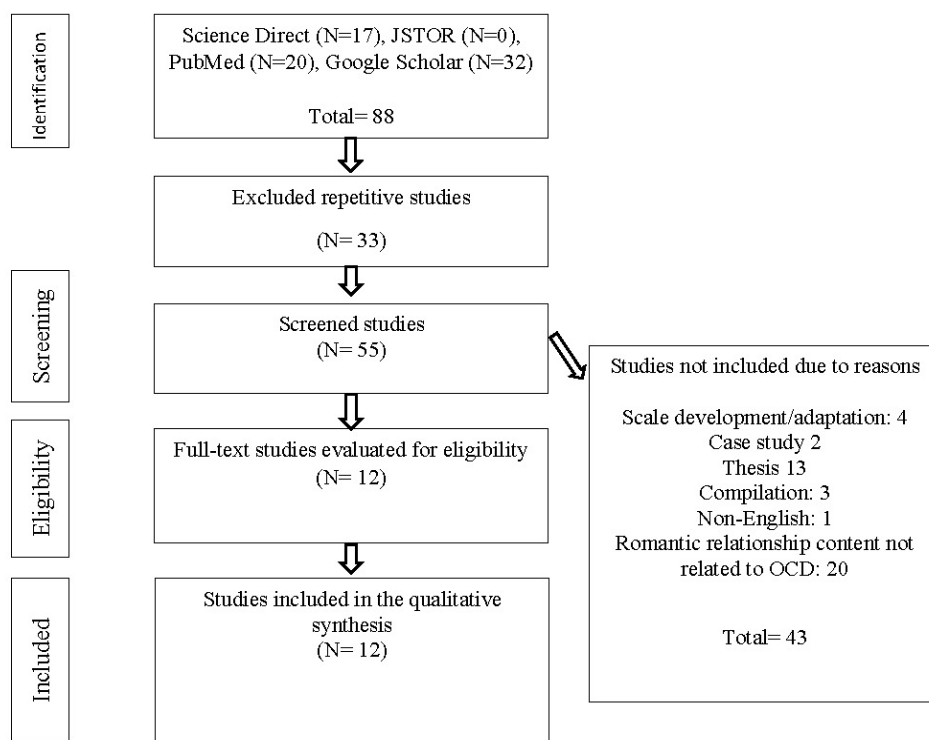


Figure 1. Flow chart for the selection of studies

Results

Methodological Characteristics of the Studies

Study Designs

Three of the 12 studies reviewed used a research design in which pre-test post-test measurement was obtained (Doron et al. 2013, Szepsenwol et al. 2016, Cerea et al. 2020). Only one of these studies with a control group was a randomized controlled trial (Cerea et al. 2020). In the other studies, the correlational method was used (78.57%). When the correlational studies are evaluated in terms of time, only one of them was a one-year longitudinal study (Szepsenwol et al. 2016), while the others were cross-sectional studies.

Sample Characteristics

The sample of the studies was Israeli (Doron et al. 2013, Doron et al. 2014b, Doron and Szepsenwol 2015, Doron et al. 2016, Szepsenwol et al. 2016), Turkish (Kılıç and Altınok 2021, Trak and İnözü 2019, Toroslu and Çırakoğlu 2022), Italian (Cerea et al. 2020, Melli et al. 2018a) and Iranian (Kabiri et al. 2017) individuals. There is only one cross-cultural study (Fernandez et al. 2021). However, the sample consisted mostly of non-clinical population (83.3%). There are only two studies conducted with individuals with OCD symptoms related to romantic relationships (Cerea et al. 2020) and diagnosed individuals who meet the diagnostic criteria for OCD according to DSM-5 in addition to romantic relationship complaints (Doron et al. 2016). The age range of the participants was between 17 and 84 years and the mean age was 33 years. All studies were carried out with adult samples and the sample size ranged from 50 people (Cerea et al. 2020) to 504 people (Trak and İnözü 2019).

Table 1. General characteristics of the studies						
Study (Co-country)	Type.	RC	Sample	Age range (Mean)	Measures	Outcomes
Cerea et al. 2020 (Italy, Israel)	Experimental Group (iApp, dApp) × Time (T0, T1) T1-T0=15 days	+	University students (N=50; 38 F, 12 M) In a relationship (n=25)	20-24 (\bar{X} =22)	SCID 5-CV, ROCI, PROCSI, OBQ-46, OCI-R, NJRE-Q-R, RSES, IUS-R, SIAS, DASS-21	Relationship-centered and partner-focused obsessive-compulsive symptoms were positively associated with OCD symptoms, obsessive beliefs and maladaptive beliefs about relationships.
Doron et al. 2013 (Israel)	Q1 → Relational	-	Individuals in a relationship (N=171; 77 F, 94 M)	19-64 (\bar{X} =37)	ROCI, ECR, OBQ-20, SISE, DASS, PSWQ	Feared self-beliefs had a moderate positive relationship with partner-focused symptoms and a high positive relationship with relationship-centered symptoms.
	Q2 → Experimental Conditions: Mild (-), Mild (+)	-	Undergraduate students in a relationship (N=80; 46 F, 34 M)	20-29 (\bar{X} =24)	ROCI, PSWQ, ECR, DASS	In individuals with high relationship-related self-worth and attachment anxiety, mild negative feedback about relational competence increased relationship-centered symptoms.
Doron et al. 2014b (Israel)	Cross-sectional	-	(N=157; F=71, M=86)	20-65 (\bar{X} =44)	ROCI, PROCSI, ISBI, RAS	Relationship satisfaction was found to fully mediate the relationship between romantic relationship symptoms and sexual satisfaction.
Doron and Szepsenwol 2015 (Israel)	Q1 → Experimental Condition1: Others Condition2: Own Condition3: Control	+	Adults in romantic relationships (N= 131; 60 F, 71 M)	23-67 (\bar{X} =46)	PROCSI, SISE	When individuals with high levels of partner-focused symptoms were asked to think that their partners were not more beautiful, moral, etc. compared to others, their self-esteem was found to be lower compared to other conditions.
	Q2 → Experimental	-	Adults in romantic relationships (N=179; 85 F, 94 M)	19-65 (\bar{X} =43)	PROCSI, SISE	When individuals with high levels of partner-focused symptoms compared their partners positively to others or to themselves, this did not contribute to their self-esteem.
Doron et al. 2016 (Israel, USA, Australia)	Cross-sectional	-	Adults (N= 72; F=39, M=43) In a relationship (n=53) R-OCD (n=22) OCD (n=22) Community/C ontrol (n=28)	R-OCD 21-40 (\bar{X} =29.89) OCD 18-49	Y-BOCS, MINI PLUS version5.0 , ROCI, PROCSI, DASS, RECATS, OBQ-20	Relationship-centered and partner-focused obsessive-compulsive symptoms were positively associated with OCD symptoms, obsessive beliefs and maladaptive beliefs about relationships.
Fernandez et al. 2021 (Australia)	Cross-sectional	-	Adults (N=264; 48.9% M) USA (n=111), UK (n=127), Canada (n=22), Australia (n=3), Ireland (n=1)	(\bar{X} =29.45) Control 18-57 (\bar{X} =31.50)	DOCS, OBQ-20, ROCI, PROCSI, RECATS, SO-OCS, FSQ, DASS-21	Feared self-beliefs had a moderate positive relationship with partner-focused symptoms and a high positive relationship with relationship-centered symptoms.

Kabiri et al. 2017 (Iran)	Descriptive-relational	-	Married and female individuals (N=195)	18-84 (\bar{X} =34.65)	ROCI, AAQ, GRIMS	Romantic relationship-centered symptoms mediated the relationship between attachment style and marital quality.
Kilic and Altinok 2021 (Turkey)	Cross-sectional	-	University students in a relationship (N=270; 161 F, 109 M) Engaged (n=22)	19-43 (\bar{X} =28)	ROCI, MJS, RTS, RAS	Both jealousy and ruminative thoughts mediated the relationship between relationship-centered symptoms and relationship satisfaction.
Melli et al. 2018a (Italy, Israel)	Cross-sectional	-	(N=124; 71% F) Married (25.8%),	17-39 (\bar{X} =21.6)	ROCI, PROCISI, FMPS, OBQ-20, RECATS, DASS	Relationship-related symptoms (relationship-centered-partner-focused) have a positive relationship with the sub-dimensions of perfectionism (except organization sub-dimension).
Szepsew ol et al. 2016 (Israel)	Longitudinal (1 year)	-	(N=141; 63 F, 78 M) Married (82.4%)	K: 19-66 (\bar{X} =42.65) M: 20-65 (\bar{X} =44.94)	ROCI, PROCISI	Relationship-centered and partner-focused symptoms were found to be highly correlated with each other in both T1 and T2 measures. Relationship duration was negatively correlated with both symptom types.
Toroslu and Çırakoğlu 2022 (Turkey)	Cross-sectional	-	(N=290; 224 F, 66 M) Married (34%)	18-58 (\bar{X} =29.77)	OCI-R, ROCI, PROCISI, IUS, FMPS, YSQ-SF-3	Early maladaptive schema domains and obsessive-compulsive symptoms related to romantic relationships were found to have a significant positive relationship.
Trak and İnözü 2019 (Turkey)	Cross-sectional	-	Adults in romantic relationships (N=504; 312 F, 192 M) Married (34.9%)	(\bar{X} =31.17)	ROCI, PBI, ECR-R, PVCSW	Anxious attachment has a mediating role in the relationship between overprotective parental attitudes and relationship-centered symptoms.

RC: Randomized control, R1: Study 1, R2: Study 2, T: Time, R-OCD: Obsessive Compulsive Disorder Involving Romantic Relationships; Measurement Tools: AAQ: Adult Attachment Questionnaire, DASS-21: Depression Anxiety Stress Scale-21, DASS: Short version of the Depression Anxiety Stress Scales, DOCS: Dimensional Obsessive-Compulsive Scale, ECR: Experiences in Close Relationships scale, FMPS: Frost Multidimensional Perfectionism Scale, FSQ: Fear of Self Questionnaire, GRIMS: Golombok-Rust Inventory of Marital State, ISBI: Sexual Behavior Inventory, IUS: Intolerance of Uncertainty Scale, IUS-R: Intolerance of Uncertainty Scale-Revised, MINI PLUS version 5.0: Mini International Neuropsychiatric Interview, MJS: Multidimensional Jealousy Scale, NJRE-Q-R: Not Just Right Experiences Questionnaire Revised, OBQ-46: Obsessive Beliefs Questionnaire-46, OBQ-20: Short-form of the Obsessive Beliefs Questionnaire, OCI-R: Obsessive Compulsive Inventory-Revised, PBI: Parental Bonding Instrument, PROCISI: Partner-Related Obsessive-Compulsive Symptoms Inventory, PSWQ: PennState Worry Questionnaire, PVCSW: Partner Value Contingent Self-Worth Scale, RAS: Relationship Assessment Scale, RECATS: Relationship Catastrophization Scale, ROCI: Relationship Obsessive-Compulsive Inventory, RSES: Rosenberg Self-Esteem Scale, RTS: Ruminative Thought Style Questionnaire, SCID 5-CV: Structured Clinical Interview for DSM-5 Clinical Version, SIAS: Social Interaction Anxiety Scale, SO-OBS: Sexual-Orientation- Obsessive Beliefs Scale, SO-OCS: Sexual-Orientation-Obsessive Compulsive Scale, Y-BOCS: Yale-Brown Obsessive-Compulsive Scale, YSQ-SF-3: Young Schema Questionnaire-Short Form-3.

Measures

In the study conducted by Doron et al. (2016) with two clinical samples (OCD with romantic content and OCD), participants were administered the clinician-completed 10-item Yale-Brown Obsessive-Compulsive Scale (Goodman et al. 1989). A structured interview used for the diagnosis of Axis I disorders was used to assess the participants' primary symptoms (MINI PLUS version 5.0; Sheehan et al. 1998). Participants whose primary symptom content was romantic relationships were diagnosed with OCD with romantic relationship content. In all of the reviewed studies, romantic relationship-centered obsessive-compulsive symptoms were assessed using the "Relationship Obsessive-Compulsive Inventory (ROCI; Doron et al. 2012a)" and partner-focused obsessive-compulsive symptoms were assessed with the "Partner-Focused Obsessive-Compulsive Symptom Scale (Partner-Focused Obsessive-Compulsive Inventory [PROCISI]; Doron et al. 2012b)". Other measurement tools used in the studies are given in Table 1 with the original abbreviations of the scales.

Outcomes of the Studies

In the current review, only four studies that examined relationship-centered obsessive-compulsive symptoms (Doron et al. 2013, Kabiri et al. 2017, Trak and İnözü 2019, Kılıç and Altınok 2021); there is one study in which only partner-focused obsessive-compulsive symptoms were examined (Doron and Szepsenwol 2015). In other studies, partner-focused and relationship-focused obsessive-compulsive symptoms were examined together (Doron et al. 2014b, Doron et al. 2016, Szepsenwol et al. 2016, Melli et al. 2018a, Cerea et al. 2020, Fernandez et al. 2021, Toroslu and Çırakoğlu 2022).

According to a one-year longitudinal study examining the interrelationship of partner-focused and relationship-centered obsessive-compulsive symptoms over time, there was a high-level, positive correlation between partner-focused and relationship-centered obsessive-compulsive symptoms both at baseline (T1) and one year later (T2) (Szepsenwol et al. 2016). Similarly, this correlation was also observed in other studies in which the two symptoms were studied together (Doron et al. 2014b, Doron et al. 2016, Melli et al. 2018a, Cerea et al. 2020, Fernandez et al. 2021). At the same time, partner-focused obsessive-compulsive symptoms are associated with a partial increase in relationship-centered obsessive-compulsive symptoms as measured one year later. Thus, it can be speculated that over time, mental preoccupation with the partner tends to spread to the relationship and gain a relational character. However, as the duration of the relationship increases, OCD symptoms related to romantic relationships have been reported to decrease (Szepsenwol et al. 2016).

In this systematic review study, the individual variables examined with OCD symptoms in romantic relationships were determined as "self-processes (self-esteem, feared self-belief), early maladaptive schemas, psychopathologies (OCD, depression), ruminative thinking style and obsessive beliefs (e.g., perfectionism)". Relational variables were identified as "attachment styles (e.g., avoidant attachment), parental attitudes (e.g., overprotective), marital quality, relationship satisfaction, sexual satisfaction, jealousy and self-processes (relationship/partner-related self-worth)". The results summarized in Table 1 regarding the relationship between symptoms and variables are presented in detail under two headings in this section.

Outcomes Related to Individual Variables

Toroslu and Çırakoğlu (2022) examined the mediating role of perfectionism and intolerance of uncertainty in the relationship between OCD symptoms in romantic relationships and early maladaptive schemas. The study concluded that OCD symptoms in romantic relationships had a significant positive relationship with perfectionism, intolerance of ambiguity and early maladaptive schema domains (other orientation, damaged boundaries, damaged autonomy, disconnection, high standards). The relationship between early maladaptive schema domains and partner-focused obsessive-compulsive symptoms was mediated by both intolerance of ambiguity (except for impaired autonomy schema domain) and perfectionism, but schema domains predicted relationship-focused obsessive-compulsive symptoms only through intolerance of ambiguity.

Doron and Szepsenwol (2015) examined self-esteem and partner-focused obsessive-compulsive symptoms in a two-stage experimental study. In the first part of the study, there were two conditions. In the first condition, individuals were asked to think that their partners had more negative characteristics (beauty, morality, intelligence and success) than others of the same gender. In the second condition, individuals were asked to compare their partners with themselves. When individuals with high levels of partner-focused symptoms were asked to think that their partners had negative characteristics compared to others, their self-esteem was observed to be lower compared to the other condition. In the second part of the study, individuals were asked to compare their partners to others and to themselves in both positive and negative ways. Accordingly, it was observed that positive comparisons made towards partners did not contribute to the determination of self-worth in individuals with high levels of partner-oriented symptoms.

Fernandez et al. (2021) conducted a study with individuals in different countries and examined OCD symptoms related to romantic relationships and feared self beliefs, and showed that these beliefs were positively correlated with both relationship-centered obsessive-compulsive symptoms and partner-focused obsessive-compulsive symptoms. Beliefs about the feared self (Markus and Nurius 1986), which refers to the self that the person is afraid of being, are likely to affect obsessions related to romantic relationships, which are related to how individuals feel in a relationship or who they are as a partner (Fernandez et al. 2021).

A study comparing OCD and OCD in romantic relationships groups with a control group indicated that OCD symptoms in romantic relationships were positively associated with obsessive beliefs (Doron et al. 2016). Similarly, relationship-centered obsessive-compulsive symptoms are positively associated with all sub-dimensions of general obsessive beliefs (Melli et al. 2018a). When the obsessive beliefs of OCD, OCD with

romantic relationships and the control group are examined, those diagnosed as OCD with romantic relationships tend to attribute more importance to thoughts and have more inflated sense of responsibility than OCD patients and the control group. Similarly, those diagnosed with OCD with romantic relationship tended to exaggerate threats and have perfectionist tendencies compared to the control group (Doron et al. 2016). Melli et al. (2018a) also found that OCD symptoms with relationship content had a positive relationship with all sub-dimensions except the organization sub-dimension of perfectionism.

In the current review, OCD symptoms related to romantic relationships were also associated with psychopathologies. OCD symptoms related to romantic relationships have a moderate correlation with OCD symptoms. In addition, individuals diagnosed with OCD with romantic relationship content experience impairment in functioning at a similar level to OCD patients (Doron et al. 2016). Other studies have also shown that symptoms have a significant positive correlation with depression (Doron et al. 2013, Doron et al. 2016, Melli et al. 2018a, Fernandez et al. 2021).

Outcomes Related to Relational Variables

The relationship between relationship-centered obsessive-compulsive symptoms and attachment styles was examined in some of the studies. Doron et al. (2013) found that relationship-centered obsessive-compulsive symptoms had a positive relationship with anxious and avoidant attachment styles. When the relationship between attachment styles and the sub-dimensions of the Romantic Relationship Obsessions and Compulsions Scale, which measures relationship-centered obsessive-compulsive symptoms, and the sub-dimensions of being loved by the partner, the accuracy of the relationship and the love for the partner, all of the sub-dimensions were significantly associated with anxious and avoidant attachment and negatively associated with secure attachment (Kabiri et al. 2017). Trak and İnözü (2019) examined the relationship between relationship-centered obsessive-compulsive symptoms and parental attitudes and anxious attachment and concluded that overprotective parental attitudes and anxious attachment were correlated with relationship-centered obsessive-compulsive symptoms and anxious attachment played a mediating role in the relationship between overprotective parental attitudes and relationship-centered symptoms. At the same time, anxious attachment has a mediating role in the relationship between overprotective parental attitudes and relationship-centered symptoms (Trak and İnözü 2019).

Relationship-centered obsessive-compulsive symptoms were found to be associated with partner-dependent self-worth (Trak and İnözü 2019), but there was no significant relationship between them and relationship-dependent self-worth (Doron et al. 2013). However, individuals with high attachment anxiety and high relationship-related self-worth are more likely to experience relationship-centered symptoms when their sense of relational competence is threatened (Doron et al. 2013).

According to the study examining the relationship between relationship-centered OCD symptoms and relationship satisfaction and sexual satisfaction, as relationship-centered OCD symptoms increase, relationship satisfaction decreases, similarly, sexual satisfaction decreases. However, relationship satisfaction has been found to play a mediating role in the relationship between OCD symptoms with romantic relationship content and sexual satisfaction (Doron et al. 2014b). One study examining relationship satisfaction reported that jealousy and ruminative thinking had a positive relationship with relationship-centered obsessive-compulsive symptoms and a negative relationship with relationship satisfaction (Kılıç and Altınok 2021). Similarly, as relationship-centered obsessive-compulsive symptoms increase in married individuals, marital quality decreases (Kabiri et al. 2017).

In their replication study, Melli et al. (2018a) confirmed that all sub-dimensions of obsessive beliefs about the relationship were positively associated with relationship-centered obsessive-compulsive symptoms. Partner-oriented symptoms were found to increase the tendency to both exaggerate threats and exaggerate the negative consequences of being in the wrong relationship.

Doron et al. (2016) also found that OCD symptoms related to romantic relationships were positively associated with maladaptive beliefs about the relationship. In the comparison made according to maladaptive beliefs in the relationship, OCD patients with romantic relationship perceived the negative consequences of being in the wrong relationship more negatively than both OCD and control groups (Doron et al. 2016).

Cerea et al. (2020) applied exposure to individuals through a mobile application containing statements challenging maladaptive beliefs in the relationship. In the study, individuals above the cut-off point of ROCI (>21.5; Melli et al. 2018b) and PROCSI (>17; Melli et al. 2018b) were randomly assigned to two groups. Individuals in the iApp group were asked to complete three levels of the application every day for 15 days. The

control group (dApp) on the waiting list was informed about the study after 15 days and were allowed to benefit from the application for 15 days. The short-term cognitive-based intervention was found to moderately reduce OCD symptoms and obsessive beliefs related to romantic relationships.

Discussion

In order to better understand the nature of OCD in romantic relationships and to serve as a resource for future studies, this review examined the factors associated with OCD symptoms in romantic relationships in individual and relational contexts. Relationship-centered and partner-focused obsessive-compulsive symptoms were found to be related to each other (e.g., Szepsenwol et al. 2016) and the findings regarding the relationship between symptoms were similar to previous studies (Doron et al. 2012b). When the relationships with individual variables were examined, OCD symptoms in romantic relationships were significantly associated with depression (Doron et al. 2013, Doron et al. 2016, Melli et al. 2018a, Fernandez et al. 2021) and OCD symptoms (Doron et al. 2016). As individuals' obsessive beliefs, which are known to be related to OCD, increase, the severity of partner-focused and relationship-centered obsessive-compulsive symptoms also increases (e.g., Doron et al. 2016). This result is consistent with both the previous studies and the findings of the studies analyzed in this study (Doron et al. 2012a, 2012b). These results support the views (Doron et al. 2012a, Doron et al. 2012b, Doron et al. 2016, Trak 2016) that OCD with romantic relationship content may be a subtype of obsessive-compulsive disorder in terms of the fact that OCD and OCD with romantic relationship content are related to each other, similar psychopathologies and similar structures.

Research has shown that the dependence of self-worth on the partner or relationship is correlated with an increase in relationship-centered obsessive-compulsive symptoms (Doron et al. 2013, Trak and İnözü 2019). However, as the feared self-beliefs of individuals increase, relationship-related OCD symptoms increase (Fernandez et al. 2021). Similar to previous studies on OCD symptoms in romantic relationships, which are known to have a negative relationship with self-esteem (Doron et al. 2012a, 2012b), negative partner-directed comparisons decrease self-esteem when symptom severity is high (Doron and Szepsenwol 2015). These findings suggest that self-processes are an important factor that increases symptom severity. However, considering its bidirectional relationship with symptom severity, it would be useful to include interventions that will contribute positively to the individual's self-processes in the future prevention studies.

Parental attitudes (e.g., overprotective) play a role in the etiology of OCD (Spiegler and Guevremont 1993), similarly, relationship-centered obsessive-compulsive symptoms are also associated with overprotective parental attitudes (Trak and İnözü 2019). According to the study on individuals' early schemas, early maladaptive schema areas have a positive relationship with obsessive-compulsive symptoms involving romantic relationships. This result is consistent with the findings of a research in which individuals with OCD were compared to the control group and scored high in all schema domains (Yoosefi et al. 2016). The relationship between parental attitudes and early maladaptive schemas and OCD is similar to OCD with romantic relationships. Therefore, such findings are expected to contribute to understand the etiology of OCD with romantic relationship in a developmental context.

Looking at the relationship between symptoms and relational variables, as the severity of symptoms with romantic relationship content increases, individuals' satisfaction with the relationship (e.g., Kılıç and Altınok 2021) and sexual life (Doron et al. 2014b) decreases, and marital quality decreases in married individuals (Kabiri et al. 2017). In addition, in line with the previous studies, both partner-focused and relationship-centered obsessive-compulsive symptoms reduced in securely attached individuals and enhanced in anxious and avoidant attachment (Doron et al. 2012a, 2012b, Doron et al. 2013, Kabiri et al. 2017). Considering the relationship between symptoms and these variables, these studies may contribute to understanding the nature of symptoms and making inferences about triggering and sustaining factors.

As for sample characteristics of the studies, most studies were carried out with community samples (e.g., Trak and İnözü 2019) and Israeli individuals (e.g., Doron et al. 2013), which reduces the generalizability of the results. In order to strengthen the generalizability of the results and to understand the nature of the symptoms, more cross-cultural and clinical studies are warranted. The studies are generally applied with individuals in a relationship (e.g., Trak and İnözü 2019) or with a mixed sample (e.g., Melli et al. 2018a), but symptoms related to romantic relationships can also be observed both during and after the termination of the relationship (Doron et al. 2014a). Therefore, to examine symptoms in individuals whose relationship has ended is crucial both in terms of understanding the nature of symptoms and their possible effects on individuals' future relationships.

In the present review, there are limited number of studies (n=1) in which partner-focused obsessive-compulsive

symptoms are explored alone (Doron and Szepsenwol 2015) and they are usually examined together with relationship-focused obsessive-compulsive symptoms in studies due to their co-occurrence in the relationship (e.g., Melli et al. 2018a). However, since partner-focused obsessive-compulsive symptoms focus on specific characteristics of the partner, examining these symptoms together with variables that may be related to the individual's functioning and relationship dynamics and factors that may affect the individual's perception of partner characteristics (e.g., perfectionism) is essential to improve understanding of the nature of the symptoms. Therefore, more studies examining partner-oriented obsessive-compulsive symptoms with individual variables are needed. Although there are no effectiveness studies on the treatment of symptoms in the literature, from the study of Cerea and colleagues (2020), we know that short-term cognitive interventions have a symptom-reducing effect. In the treatment of symptoms, in addition to taking into account the individual's self-worth and attachment processes, the partners can also be included in the process (Doron and Derby 2017), however, it appears that the studies were solely based on individuals and partners were not involved in the studies (Doron and Derby 2017). In the literature, the couple-based approach based on the principles of cognitive behavioral couple therapy and ERP for OCD focuses on reducing the adaptive behaviors of couples to OCD and improving their communication and problem-solving skills. This approach reportedly leads to a significant reduction in symptoms and the reduction in symptoms is maintained at 6-12 months follow-up (Abramowitz et al. 2013, Epstein and Le 2017). Comparably, family-inclusive treatments for OCD include reducing the level of adaptation of family members to compulsive behaviors and rituals and receiving support from them to cope with compulsions. In a meta-analysis study, interventions aiming to reduce family adaptation to OCD symptoms were found to be more effective in improving functionality and more effective than individual-based CBT for adults (Thompson-Hollands et al. 2014). On the basis of these findings, CBT-based couple therapy or family therapies in which partners are included in the process can be used in the treatment of OCD symptoms involving romantic relationships, and these therapies are likely to be more effective on symptoms than individual-based therapies.

Conclusion

According to this review study in which OCD symptoms in romantic relationships were examined in the context of individual and relational variables, it was concluded that OCD symptoms in romantic relationships are related to each other and to many different factors that play a role in both individual and relational contexts. When the factors associated with OCD symptoms in romantic relationships were assessed in the individual context, symptoms were related to self-processes (self-esteem, feared self-belief), early maladaptive schemas, psychopathologies (OCD, depression), ruminative thinking style and obsessive beliefs. In the relational context, symptoms were related to attachment styles, parental attitudes, marital quality, relationship satisfaction, sexual satisfaction, relationship/partner-related self-worth, relationship obsessive beliefs and jealousy. In addition, cognitive interventions to expose romantic relationship maladaptive beliefs appear to reduce symptoms (Cerea et al. 2020).

In the future, there is a strong need for cross-cultural studies and intervention studies with clinical samples, as well as studies on the effectiveness of couple-based cognitive behavioral therapy in which partners are included in the treatment process, and more randomized controlled experimental studies are required to explain causal relationships.

Apart from the contribution of the present study to evaluate the studies on obsessive-compulsive symptoms related to romantic relationships as a whole, it also has limitations. Because of the limited number of publications, studies published in Turkish were not included in the study. OCD symptoms related to romantic relationships do not differ according to gender (Doron et al. 2012a, Doron et al. 2012b, Doron et al. 2013). Since only Kılıç and Altınok (2021) reported a significant difference between genders in the love for partner sub-dimension of the Romantic Relationship Obsessions and Compulsions Scale, sociodemographic variables were not focused on in this review study. In addition, the review study by Doron et al. (2014a) and this systematic review study had different and similar aspects. In the aforementioned study, according to the authors' clinical observations, experiences and the results of the studies, the structure of the symptoms, their relationship with the variables discussed, evaluation and possible treatment methods over the existing OCD treatments were discussed. Although the study by Doron et al. (2014a) is similar to the current systematic review study in terms of explaining the relationships with variables, this study differs in the sense that it is the first systematic review study in the international and national literature that brings together the studies on the subject to date.

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Authors Contributions: The author(s) have declared that they have made a significant scientific contribution to the study and have assisted in the preparation or revision of the manuscript

Peer-review: Externally peer-reviewed.

Conflict of Interest: No conflict of interest was declared.

Financial Disclosure: No financial support was declared for this study.