



Do perfectionism and intolerance of uncertainty mediate the relationship between early maladaptive schemas and relationship and partner related obsessive–compulsive symptoms?

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Accepted: 24 March 2022 / Published online: 11 April 2022

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Abstract

The current study examines the mediating role of perfectionism and intolerance of uncertainty in the relationship between relationship and partner-related obsessive–compulsive (OC) symptoms and early maladaptive schema (EMS) domains. Additionally, to examine which schema domains might predict relationship and partner-related OC symptoms. The study sample consists of 290 individuals between the ages of 18–58; who have an ongoing romantic relationship and do not have any psychological/psychiatric diagnosis during the data collection period. The model analysis results examining the factors related to the development and level of relationship-related OC symptoms showed that all schema domains (except for impaired limits) predicted increases in relationship-related OC symptoms through the mediation of intolerance of uncertainty. It was observed that the other-directedness schema domain did not directly affect relationship-related OC symptoms; only impaired autonomy, disconnection, and unrelenting standards schema domains had a direct effect on relationship-related OC symptoms. The model analysis results examining the factors related to the development and level of partner-related OC symptoms showed that impaired autonomy, disconnection, and unrelenting standards schema domains predicted increases in partner-related OC symptoms through the mediation of perfectionism. It was seen that other-directedness and impaired limits schema domains did not directly affect partner-related OC symptoms; only impaired autonomy, disconnection, and unrelenting standards schema domains had a direct effect on partner-related OC symptoms. The findings of the current study were discussed in light of the relevant literature.

Keywords Relationship and partner-related obsessive–compulsive symptoms · Early maladaptive schema domains · Perfectionism · Intolerance of uncertainty

Introduction

The recent studies by Doron et al., (2012a, 2012b) suggest that romantic relationship and partner-related obsessive–compulsive symptoms (ROCD) may be another

symptom content of obsessive–compulsive disorder (OCD). ROCD symptoms are the general term defined as obsessive–compulsive symptoms that can be seen in close relationships, which consist of two sub-dimensions, namely relationship-related obsessive–compulsive symptoms (relationship-related OC) and partner-related obsessive–compulsive symptoms (partner-related OC) (Doron et al., 2012a, 2012b). Various cognitive factors such as perfectionism (Doron et al., 2014; Yıldırım, 2018) and intolerance of uncertainty (Doron et al., 2014) are thought to play a role in ROCD symptoms. In addition, it is stated that early experiences such as attachment and familial factors also play a role in the development and maintenance of ROCD symptoms (Doron ve ark., 2012a; 2012b; 2014; 2016; Trak, 2016; Yıldırım, 2018). According to the definition made by Young et al. (2003), early maladaptive schemas encompass one's cognitions, emotions, memories, and bodily sensations;

This article was based on a master's thesis submitted by the first author, under the supervision of the second author, to the Institute of Social Sciences, Department of Psychology (Clinical Psychology Program) at Baskent University.

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related to one's self and other relationships. It develops during childhood or adolescence, continues in detail throughout the person's life, and includes non-functional, highly diffused, and repetitive patterns. Since early maladaptive schemas (EMS) are structures shaped by various early experiences during childhood; and pave the way for the emergence of various psychopathologies in adulthood (Young et al., 2003), it was thought that ROCD symptoms could also be explained in the context of EMS. Therefore, we aimed to test a developmental model that examines the roles of EMS, intolerance of uncertainty, and perfectionism in the development of ROCD symptoms.

ROCD

Based on clinical observations and research, Doron et al., (2012a, 2012b) examined these OC symptoms in two main groups: relationship-related and partner-related symptoms. According to Doron et al. (2012a), relationship-related obsessions focus on romantic relationships, and they consist of excessive preoccupation and doubts about the person's emotions towards their partner, the relationship itself, and the partner's feelings. These obsessions can be in the form of thoughts and doubts about the relationship experience itself, the feelings of the partner and the person, or images or impulses such as a desire to break up. To reduce the discomfort caused by these obsessive thoughts/images/impulses, people may also mentally neutralize (neutralization) various compulsions and/or obsessions such as assurance, controlling behaviors and making comparisons. Another symptom group observed in ROCD is the partner-related obsessions and compulsions. Doron et al. (2012b) describe partner-related obsessions as excessive mental preoccupation and doubts about the partner's defects perceived by the person. Partner-related obsessions consist of six sub-dimensions regarding perceived defects in the partner, such as the physical appearance of the partner, social skills, professional competence (success), morality, intelligence, and emotional stability. To reduce the discomfort caused by these obsessions, compulsions such as checking, seeking approval, and neutralization may occur. A person experiencing obsessive thoughts about their partner's morality may ask questions to test their partner. One who doubts their partner's social skills can constantly put their partner in different environments and compare them with others. People who think that their partner is unattractive can compulsively envision their partner's positive and attractive aspects. According to Doron et al., (2012a, 2012b), relationship and partner OC symptoms can cause severe difficulties in people's lives because they are related to the relationship itself, the relationships' emotions and experiences, and the partner.

When we look at the common features of relationship-related and partner-related OC symptoms, these thoughts/

images/impulses are defined as intrusive. In other words, they suddenly enter the person's mind; they are not wanted and accepted. These intrusive thoughts are generally incompatible with one's relationship experience or individual morals and values (ego-dystonic) (Doron et al., 2014). Therefore, even if the person thinks it is exaggerated, obsessions disturb the person, arouse anxiety, and cause feelings such as guilt and shame (Doron et al., 2012a, 2014). In order to reduce this discomfort and anxiety, repetitive compulsions such as checking, seeking approval, making comparisons, mental rituals, and neutralization can develop that the person cannot prevent themselves from doing (Doron et al., 2012a, 2014). The point that separates these two ROCD dimensions is that while relationship-related OC symptoms primarily consist of doubts about the correctness of the relationship, the love of the partner, or the feelings of the person towards their partner; partner-related symptoms are more characterized by doubts about various physical, social, cognitive, or moral characteristics of the partner.

Although it is not known precisely when romantic relationships and partner-related OC emerge, it has been observed that the complaints of individuals suffering from such OC symptoms start in early adulthood (Doron et al., 2014). Relationship and partner-related OC symptoms were found not to be related to gender or the duration of the relationship (Doron et al., 2013, 2014; Doron et al., 2012a, 2012b). It seems that there is no gender difference in terms of relationship and partner-related OC symptoms (Bakçepinar, 2019; Cebeci, 2019; Trak, 2016). However, recent research indicates a significant negative relationship between the duration of the relationship and ROCD symptoms (Bakçepinar, 2019; Trak, 2016). Six beliefs, identified by Obsessive Compulsive Cognitions Working Group (1997), are thought to play an essential role in obsessive-compulsive symptoms. These beliefs are over-importance of thoughts, excessive responsibility; overestimation of threat; the importance of controlling thoughts; intolerance of uncertainty, and perfectionism. These obsessive beliefs can be seen together and interact with each other. In the study conducted by Doron et al., (2012a, 2012b), it was suggested that beliefs related to obsessions and compulsions are also associated with romantic relationships and partner-related OC symptoms. Based on this, it is predicted that beliefs related to obsessions and compulsions play a vital role in developing a romantic relationship and partner-related OC symptoms. It is seen that the most prominent ones among these beliefs are perfectionism and intolerance to uncertainty (Doron et al., 2014; Melli et al., 2018; Yıldırım, 2018).

Perfectionism

Many theorists define the concept of perfectionism as a multidimensional concept (Frost et al., 1990; Hamachek,

1978; Hewitt & Flett, 1991). Frost et al. (1990) define perfectionism as a five-dimensional structure: excessive attention to mistakes, doubt of behavior, personal standards, parental criticism, parental expectations, and organization. Therefore, perfectionist thoughts and evaluations are at the forefront of this conceptualization. Various studies examining the relationship between OCD and perfectionism have found that perfectionism is associated with OCD (Frost & Steketee, 1997; Frost et al., 1994; Rasmussen & Tsuang, 1986). With perfectionist thoughts and behaviors, themes of avoiding negative consequences such as failure, uncertainty, and disaster, people's hypersensitivity to making mistakes are similar to the reasoning behind OCD and perfectionism.

Considering the observations and studies conducted with OCD patients, the developmental process of perfectionist tendencies may be related to one's parents. It is thought that parental perfectionism may lead to perfectionist tendencies in children (Rasmussen & Eisen, 1989), and these perfectionist tendencies that develop through childhood may be one of the precursors of OCD (Honjo et al. 1989; Lo, 1967; Rasmussen & Tsuang, 1986). Likewise, in addition to the other OCD-related beliefs mentioned earlier, perfectionism is thought to be a significant factor in the development and continuation of relationship and partner-related OC symptoms (Doron et al., 2014; Melli et al., 2018). In a study conducted by Doron et al., (2012a, 2012b) with a non-clinical sample, moderate correlations were found between relationship and partner-related OC symptoms and perfectionist cognitions. Similarly, in the study conducted by Melli et al. (2015), perfectionism and OCD cognitions were associated with relationship and partner-related OC symptoms. In another study conducted with a clinical sample, a higher level of perfectionism was observed in both the OCD group and the relationship and partner-related OC group compared to the control group (Doron et al., 2016).

Intolerance of Uncertainty

According to Freeston et al. (1994), intolerance to uncertainty includes the person's biased emotional, cognitive, and behavioral responses in the face of uncertainty. It has been stated that it consists of dysfunctional information processing and control, anxiety in the face of uncertainty, belief in eliminating uncertainty and controlling the future, beliefs about the negative consequences of uncertainty, and weakness in coping with uncertainty.

Intolerance of uncertainty is one of the cognitions that play a role in OCD, identified by the Obsessive–Compulsive Cognitions Study Group (1997). In these studies, it was observed that cognitions related to intolerance to uncertainty, which is common in OCD, "need for certainty", "beliefs that the person cannot cope with changing situations or future situations if they are not certain beforehand", and

"inability to show adequate functionality in uncertain situations" came to the fore. Intolerance of uncertainty is also a mediating factor in the relationship between anxiety and neuroticism, suggesting it is a broader antecedent (Sexton et al., 2003). Other research findings also revealed that intolerance to uncertainty mediated the relationship between neuroticism and various psychopathologies (OCD, Depression, Generalized Anxiety Disorder, and Social Phobia) (Carleton et al., 2010; McEvoy & Mahoney, 2011). Considering the content of relationship and partner-related OC symptoms, Doron et al. (2014) suggest that intolerance to uncertainty is highly associated with relationship and partner-related OC symptoms (Doron et al., 2016, 2012a, 2012b).

Early Maladaptive Schemas (EMS)

According to Young et al. (2003), negative experiences in childhood and early maladaptive schemas (EMS) are the basis of many adult psychopathologies. According to the definition made by Young et al. (2003), EMS; encompasses one's cognitions, emotions, memories, and bodily sensations; related to one's self and other relationships; forms during childhood or adolescence and continues to develop throughout the person's life. It includes non-functional, highly diffused, and repetitive patterns. Young et al. (2003) defined 18 EMS in their schema therapy model. These 18 schemas are grouped under 5 EMS domains connected with emotional needs that are not met in childhood. These schema domains are impaired autonomy, disconnection, unrelenting standards, impaired limits, and other-directedness. The impaired autonomy schema domain is associated with self-assertion, functioning independently, being self-sufficient, standing on one's own, and self-confidence. Individuals with a high disconnection schema domain may believe that the people in their lives are unreliable, their needs such as love and affection will not be met, others can deceive them, and that they are flawed, different from others, and unlovable. People with an unrelenting standards schema domain may set unrealistic and excessive standards for themselves and those around them to avoid criticism and receive love and approval. The impaired limits schema domain is associated with the tendency to limit oneself, deficiencies in goal-directed behaviors and responsibilities, not respecting the rights of others, thinking of oneself as privileged and special, and inability to achieve self-control. Finally, the other-directedness schema domain is associated with unawareness or suppression of one's own needs and traits such as resentment, anger, and difficulty in forgiveness when the needs and expectations from others and themselves are not met (Young et al., 2003). It has been stated that early maladaptive schemas and coping behaviors with these schemas play an essential role in the formation of

many psychopathologies such as personality disorders, depression, anxiety disorders, eating disorders, and substance use disorders (Young et al., 2003). Research findings show that EMS was found to be highly correlated with personality disorders (e.g., Çakır, 2007; Joveev & Jackson, 2004; Lobbestael et al., 2008; Nordahl et al., 2005) and other psychopathologies (e.g., Haaland et al., 2011; Halvorsen et al., 2009, 2010; Leung et al., 1999; Petrocelli et al., 2001; Riso et al., 2006; Unoka et al., 2007; Yoosefi et al., 2016).

Although there is no direct study between EMSs and perfectionism and intolerance of uncertainty, studies have insecure attachment styles (anxious and avoidant) associated with EMSs (Mason et al., 2005; Young et al., 2003). Attachment avoidance (Mikulincer & Horesh, 1999; Mikulincer & Shaver, 2007; Yıldırım, 2018) and attachment anxiety (Yıldırım, 2018) are found to be related to perfectionistic tendencies to others. Also, perfectionist tendencies include unrealistic expectations and standards that a person creates for themselves and others (Hewitt & Flett, 1991). As mentioned earlier, various studies indicate that parental perfectionism may lead to perfectionist tendencies in children (Honjo et al., 1989; Lo, 1967; Rasmussen & Eisen, 1989; Rasmussen & Tsuang, 1986). In addition, when EMS is considered, individuals with unrelenting standards schema domain define their parents as demanding, punitive, pessimistic, and perfectionist (Young et al., 2003). When characteristics like high standards, approval-seeking, failure, suppression of emotions, avoidance of making mistakes, excessive and rigid values (should and must phrases), excessive regularity, need for approval, unrealistic goals and expectations are taken into account, it is thought that they are related to perfectionism (Karaosmanoğlu, 2004). Regarding the developmental origins of perfectionism and its relations with schemas, it is thought that early life experiences of individuals may lead to perfectionist tendencies. However, no empirical study has been found about this relationship within the literature. For the relationship between intolerance of uncertainty and EMS, no study focusing on the relationship between these two concepts was found. However, studies show that parent–child experiences are related to individuals' tendency to uncertainty and intolerance to uncertainty (Sorrentino et al., 1990; Yüksel, 2014; Zlomke & Young, 2009). In the study conducted by Yüksel (2014), it was observed that an increase in the level of insecure attachment increased the level of intolerance to uncertainty and trait anxiety. In another study by Zlomke and Young (2009), the relationships between individuals' perceived parental upbringing, intolerance to uncertainty, anxiety, worry, and depression were examined. It has been observed that parents' controlling and overprotective approaches are positively related to individuals' anxiety and fear levels in adulthood. Also, anxious attachment patterns are associated

with high uncertainty intolerance in adulthood (Clark et al., 2020; Wright et al., 2017). In addition, it has been found that intolerance to uncertainty mediates the relationship between anxious parenting behaviors and anxiety symptoms in the future (Zlomke & Young, 2009). From this, it can be thought that EMS, which is claimed to develop with early experiences, may affect intolerance of uncertainty.

Current Study

Relationship and partner-related OC symptoms are highly correlated with interpersonal interactions and experiences due to their content and implications. In addition to some cognitive predispositions, attachment problems and self-related processes are also essential factors that play a role in the formation and maintenance of these symptoms (Doron et al., 2013, 2014; Trak, 2016; Yıldırım, 2018). It is emphasized that EMS is at the root of various psychopathologies, including OCD and other problems that cannot be included in any diagnostic criteria but can create problems in one's mental health and daily life (Young et al., 2003). Thus, it is thought that early maladaptive schemas may play a role in the relationship and partner-related OC symptoms.

However, only one study examined the relationship between EMS and ROCD symptoms (e.g., Bakçepinar, 2019). In the study conducted by Bakçepinar (2019), the relationship between schema domains and relationship and partner-focused OC symptoms was examined with multiple regression and primarily focused on the relationship between partners' ROCD symptoms. Unlike Bakçepinar's (2019) study, the present study is one of the pioneering studies examining the relationship between relationship and partner-related OC symptoms and EMS and presenting a model that includes other cognitive factors that may be effective in the relationship between these variables. Understanding which schemas can be seen in a relationship and partner-related OC symptoms will contribute to a better understanding of the different aspects of OCD, and it may help better explain the antecedents of relationship and partner-related OC symptoms, which include more relational themes in terms of its content and effect. In addition, cognitive factors such as intolerance of uncertainty and perfectionism play a vital role in predicting OCD and relationship and partner-related OC symptoms. However, no studies were found on the mediating role of intolerance of uncertainty and perfectionism in predicting relationship and partner-related OC symptoms. There is only one study examining the mediating role of perfectionism in the relationship between relationship and partner-related symptoms and autonomy support, psychological control, and attachment styles (e.g., Yıldırım, 2018). Other studies on relationship and partner-related OC symptoms focused on attachment styles and self-processes

(Trak, 2016; Trak & İnozü, 2019); predictor role of perfectionist tendencies in the relationship between autonomy support, psychological control, and attachment styles (Yıldırım, 2018); marital satisfaction and spousal support (Cebeci, 2019) and the relationship between social appearance, ruminative thinking and body image (Abak, 2019).

Apart from the studies mentioned above, the current study aims to examine the mediating roles of perfectionism and intolerance of uncertainty in the relationship between relationship and partner-related OC symptoms and EMS domains. It is predicted that perfectionism and intolerance to uncertainty may play a mediating role in the relationship between EMS domains and ROCD symptoms (see Fig. 1). Accordingly, it has been hypothesized that EMS domains may predict and increase the perfectionist tendencies and intolerance of uncertainty levels in individuals, and these increases may also predict the increase in the relationship and partner-related OC symptoms.

Method

Participants

The sample of the study comprised 413 participants. Their ages ranged from 18 to 58 ($M = 29.77$, $SD = 10.04$). The sample was obtained by convenience sampling via an online survey. Forty-five people who did not have an ongoing romantic relationship when they participated in the study were excluded from the data set. In addition, 67 people who reported having a psychological/psychiatric diagnosis were also excluded. After the multivariate analysis, 11 participants were excluded from the data set to not interfere with the model analysis. As a result, the study was conducted with 290 participants. Of the participants, 224 (77.2%) were female, and 66 (22.8%) were male. The relationship duration of the participants ranged from 1 to 433 months ($M = 73.71$,

Table 1 Demographics of Participants

	N	%
Gender		
Women	224	77.2
Men	66	22.8
Education		
High school	6	2.1
Undergraduate student	71	24.5
Undergraduate	124	42.8
Graduate student	58	20
Graduate	31	10.7
Marital Status		
Not married (in a relationship)	192	66.2
Married	98	33.8

N: Number of participants

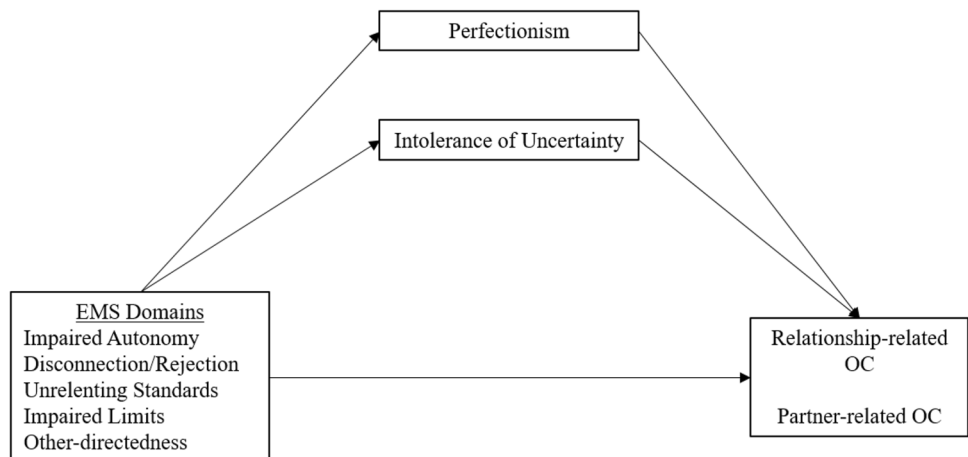
$SD = 89.36$). Other demographic variables were presented in Table 1.

Measurements

Obsessive–Compulsive Inventory-Revised (OCI-R)

The OCI-R is an 18-item, 5-point Likert type (ranging from 0: Not at all to 4: Extremely) scale to measure the general symptoms of obsessive–compulsive disorder and the level of obsessive–compulsive symptoms (Foa et al., 2002). Higher scores indicate an increase in obsessive–compulsive symptom levels and distress. The scale can be used in clinical and non-clinical samples (Foa et al., 2002). The Turkish adaptation of the scale showed that the scale has satisfactory validity and reliability, and Cronbach Alpha coefficients for internal consistency were found as 0.90 for the total scale (Yorulmaz et al., 2015).

Fig. 1 Proposed model for the connection between the individual’s early maladaptive schema domains, perfectionism, intolerance to uncertainty, relationship and partner-related obsessive-compulsive symptoms



In the current study, the Cronbach Alpha coefficient was found as 0.98.

Relationship Obsessive–Compulsive Inventory (ROCI)

The ROCI is a 14-item, 5-point Likert type scale (ranging from 0: Not at all to 4: Very much) to measure the severity of relationship-related obsessive–compulsive symptoms (Doron et al., 2012b). Higher scores indicate an increase in relationship-related obsessive–compulsive symptom levels. The Turkish adaptation of the scale showed that the scale has good validity and reliability; Cronbach Alpha coefficients for internal consistency were found as 0.89 for the total scale (Trak & İnözü, 2017). The Cronbach Alpha coefficient was found as 0.90 for the total scale in the current study.

Partner-Related Obsessive–Compulsive Symptoms Inventory (PROCSI)

The PROCSI is a 28-item, 5-point Likert type scale (ranging from 0: Not at all to 4: Very much) to measure the severity of partner-related obsessive–compulsive symptoms (Doron et al., 2012b). Higher scores indicate an increase in partner-related obsessive–compulsive symptom levels. The Turkish adaptation of the scale showed that the scale has good validity and reliability, and Cronbach Alpha coefficients for internal consistency were found as 0.94 for the total scale (Trak & İnözü, 2017). The Cronbach Alpha coefficient was found as 0.93 for the total scale in the current study.

Intolerance of Uncertainty Scale (IUS)

The IUS is a 27-item, 5-point Likert type scale (ranging from 0: Not at all representative to 4: Completely representative), which aims to measure the emotional, cognitive, and behavioral responses of individuals to uncertain situations (Freeston et al., 1994). Higher scores indicate an increase in a person's intolerance to uncertainty. The Turkish adaptation of the scale showed that the scale has good validity and reliability. It reflects the cognitive, emotional, and behavioral dimensions of intolerance to uncertainty; Cronbach Alpha coefficients for internal consistency were found as 0.93 for the total scale (Sarı & Dağ, 2009). The Cronbach Alpha coefficient was found as 0.94 for the total scale in the current study.

Frost Multidimensional Perfectionism Scale (FMPS)

The FMPS is a 36-item, 5-point Likert type scale (ranged from 0: Strongly disagree to 4: Strongly agree) to measure perfectionism multidimensionally (Frost et al., 1990). The Turkish adaptation of the scale showed that the scale has satisfactory validity and reliability (Sayıl et al., 2012). It is

stated that the scale can be evaluated as five sub-dimensions, adaptive (personal standards/organization) and maladaptive perfectionism (concern over mistakes, doubting, parental expectations, parental criticism). Higher scores indicate an increase in maladaptive perfectionistic tendencies. FMPS was evaluated as maladaptive perfectionism in the current study, and the Cronbach Alpha coefficient for maladaptive perfectionism was found as 0.91.

Young Schema Questionnaire-Short Form-3 (YSQ-SF-3)

The YSQ-SF-3 is a 90-item, 6-point Likert type scale (ranging from 1: Completely untrue for me to 6: Completely true for me), aiming to measure early maladaptive schemas (Joung & Brown, 1994; Joung et al., 2003). In Turkish adaptation, the factor structure of the scale found as 14 maladaptive schema dimensions under the five schema domains: Impaired Autonomy (Enmeshment/ Dependency, Abandonment, Failure, Pessimism, Vulnerability to Harm); Disconnection/Rejection (Emotional Deprivation, Emotional Inhibition, Social Isolation/ Mistrust, Defectiveness); Unrelenting Standards (Unrelenting standards, Approval-seeking); Impaired Limits (Insufficient Self-Control/ Self-Discipline); and Other-Directedness (Self-Sacrifice, Punitiveness) (Soygüt, Karaosmanoğlu & Çakır, 2009). Higher scores indicate an increase in early maladaptive schemas regarding their number and severity. YSQ-SF-3 has been translated into many languages; it can also be used in clinical and non-clinical samples (Soygüt et al., 2009). The Cronbach alpha coefficients of the scale were reported to be between 0.53 and 0.81 for the schema domains. In the current study, the Cronbach Alpha coefficients for the internal consistency of the schema domains were found to be between 0.78–0.92.

Statistical Analysis

IBM SPSS (Statistical Package for Social Sciences) Statistics 25 package program was used for all analyzes. SPSS PROCESS Macro version 3.4 package (Hayes, 2017) was used for model analysis to test the mediating role of perfectionism and intolerance of uncertainty (mediating variables: M) in the relationship between relationship and partner-related OC symptoms (predicted variables: Y) and EMS domains (predicting variables: X).

Mediator models allow us to see total effects (effect of X on Y: "path c"); direct effect (the effect of X on Y when the effects of other variables in the model are controlled for: "c' path") and the indirect effects (the effect of X on Y through M: ab) (Hayes, 2017). The Bootstrap method was used to test the significance of the mediators in the model. This allows the model to be tested with a larger data set by resampling the data taken from the current data set (Hayes, 2017). It is stated that the Bootstrap method, which allows

us to test whether the mediation is statistically significant in mediator model analysis, is more advantageous than methods such as the Sobel z test (Hayes, 2017). Model 4 was selected for testing the mediation model. Model 4 allows the testing of multiple mediator variables when they are related to each other, but no causality is defined between them (Hayes, 2017; Kane and Ashbaugh, 2017). Although perfectionism and intolerance to uncertainty are related in this study, Model 4 was preferred because a causal relationship was not defined between them. The dependent variable/predicted variable (relationship and partner-related OC symptoms) were analyzed separately for each schema domain as relationship-related and partner-related. A total of 10 model analyzes were conducted in which the relationship of five schema domains and two mediator variables with relationship-related and partner-related OC symptoms were examined.

Results

Pearson Correlation analysis was conducted to examine the relationships between EMS domains, relationship and partner-related OC symptoms, perfectionism, and intolerance to uncertainty levels, which are the main variables of the study. The findings of correlation analysis are presented in Table 2.

It was observed that the increase in the age of the participants was associated with a decrease in the relationship-related OC symptom level (Table 2). However, no significant relationship was found between the age of the participants and the symptoms of partner-related OC. As for the relationship duration of the participants, it was found that the increase in the duration of the relationship was associated with the decrease in both relationship and partner-related OC symptoms. When correlations between obsessive–compulsive symptom level and relationship and partner-focused OC symptoms are examined, there was a positive and significant relationship between OCD symptom level and relationship-related OC symptom level ($r=0.34, p<0.001$) and between OCD symptom level and partner-focused OC symptoms ($r=0.36, p<0.001$). The correlation values were statistically significant but not high enough [>0.70 , (Tabachnick & Fidell, 2013)] to create the possibility of multicollinearity (Tabachnick & Fidell, 2013). Thus, relationship and partner-related symptoms may be related to general OCD while remaining differentiable. The findings were in line with the claims that relationship and partner-related OC symptoms might be a differentiated sub-type of OCD (Doron et al., 2012a, 2012b). Correlation results with the main variables showed positive and significant relationships between schema domains, perfectionism level, intolerance to uncertainty level, relationship-related symptoms, and partner-related symptoms.

Table 2 Correlations Among Variables

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	29.77	10.04	-											
2. Relationship Duration (in months)	73.71	89.36	.81***	-										
3. General Obsessive–Compulsive Symptoms	23.20	12.33	-.12*	-.06	-									
4. Intolerance of Uncertainty	73.36	21.04	-.22***	-.13*	.51***	-								
5. Maladaptive Perfectionism	54.61	16.47	-.14*	-.07	.38***	.52***	-							
6. Relationship Related Obsessive–Compulsive Symptoms	12.21	9.98	-.18**	-.27***	.34***	.41***	.30***	-						
7. Partner Related Obsessive–Compulsive Symptoms	18.89	16.52	-.11	-.13*	.36***	.38***	.42***	.66***	-					
8. Impaired Autonomy	61.89	21.30	-.14*	-.11	.43***	.57***	.60***	.49***	.48***	-				
9. Disconnection	30.69	11.49	-.15*	-.11	.34***	.50***	.54***	.40***	.45***	.60***	-			
10. Unrelenting Standards	29.46	8.23	-.18**	-.11	.41***	.56***	.57***	.38***	.43***	.49***	.47***	-		
11. Impaired Limits	23.87	6.92	-.25***	-.19**	.25***	.27***	.25***	.16**	.18**	.22***	.31***	.41***	-	
12. Other Directedness	34.82	9.05	.05	.05	.38***	.42***	.48***	.23***	.30***	.51***	.48***	.51***	.16**	-

$N=290$ * $p<.05$, ** $p<.01$, *** $p<.001$

Separate independent samples t-test was conducted to test whether the relationship and partner-related OC symptoms differed according to gender. Before the analysis, the analysis was carried out by randomly selecting 66 participants from among the female participants so that the difference in the number of people in the groups would not create a bias in the analysis. According to the analysis results, it was seen that women and men did not differ in terms of relationship-related OC symptom levels [$t(130) = 0.15, p = 0.878$]. Similarly, there was no statistically significant difference between men and women in the level of partner-related OC symptoms [$t(130) = -0.26, p = 0.795$].

Results of the Model Analyses

In line with the findings of the preliminary analyses, age, general OCD symptoms, and duration of the relationship were assigned as a covariate to the model made with relationship-oriented OC symptoms in the first place. However, since age did not systematically predict relationship-related symptoms in the model analysis findings, the general OCD symptoms and duration of the relationship were taken as a covariate in the main model. The model results for the relationship-related OC symptoms showed that impaired autonomy, disconnection, and unrelenting standards schema domains predicted an increase in individuals' relationship-related OC symptom levels after controlling for general OCD symptoms and relationship duration. They had a direct effect on predicting relationship-related OC symptoms and through the mediation of intolerance of uncertainty (indirect effect). However, it was found that perfectionism did not have a mediating role in this relationship. The other-directedness schema domain predicted an increase in relationship-related OC symptom levels through the mediation of intolerance of uncertainty; but not through the mediation of perfectionism. The impaired limits domain did not have a direct and an indirect effect on relationship-related OC symptoms. Model analysis findings for all schema domains were presented in Table 3.

For the model conducted with partner-oriented OC symptoms, general OCD symptoms and relationship duration were assigned as a covariate in the first place. However, since relationship duration did not systematically predict partner-related symptoms, only the general OCD symptoms were added as a covariate in the main model. The model results for the partner-related OC symptoms showed that impaired autonomy, disconnection, and unrelenting standards schema domains predicted an increase in individuals' partner-related OC symptom levels after controlling for general OCD symptoms. They had a direct effect on predicting partner-related OC symptoms and through the mediation of perfectionism (indirect effect). However, it was found that

Table 3 Parallel mediation model for schema domains, Perf., IU, Relationship and Partner related OC symptoms

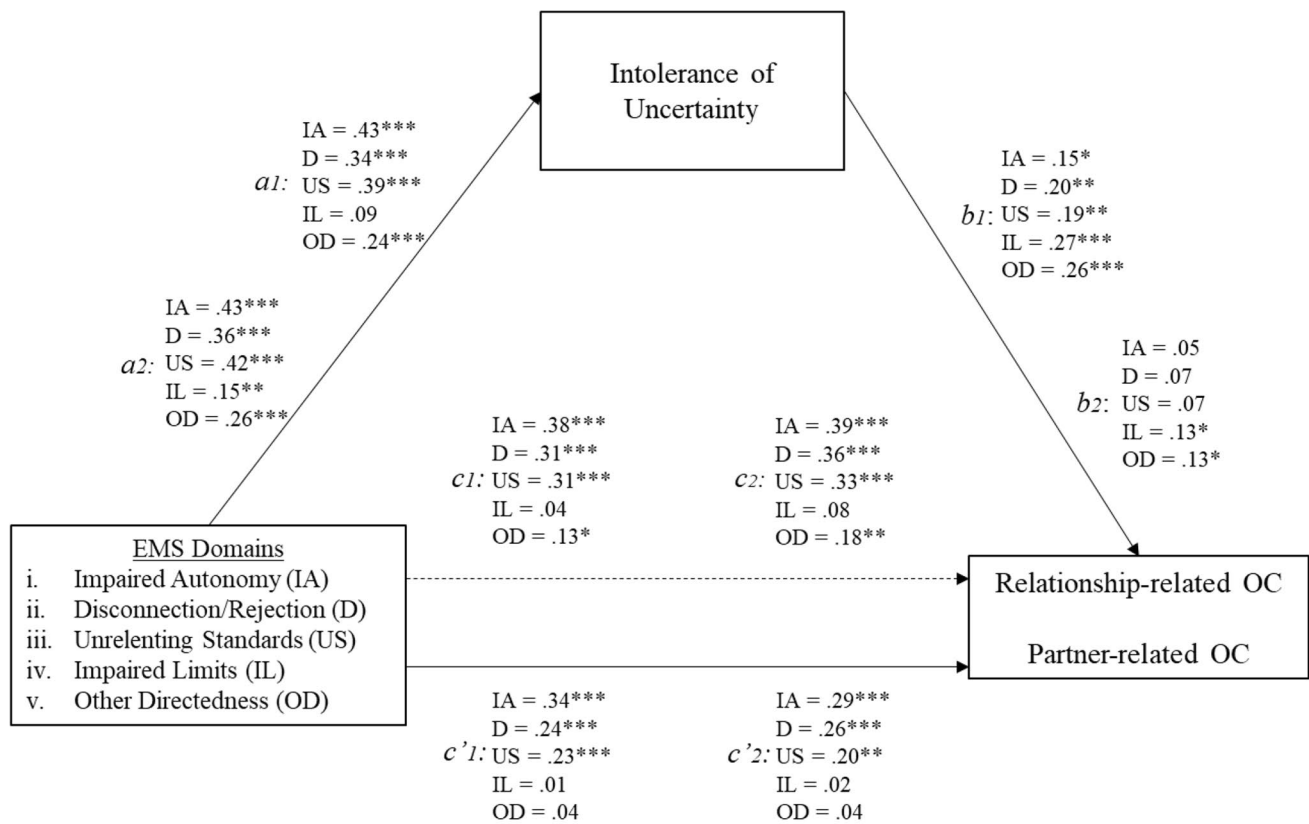
DV: Relationship related OC	Effect	BootSE	LLCI	ULCI
IA → Perf. → Relationship OC	-.02	.34	-0,0973	0,0510
D → Perf. → Relationship OC	.00	.03	-0,0574	0,0650
US → Perf. → Relationship OC	.00	.03	-0,0648	0,0770
IL → Perf. → Relationship OC	.01	.01	-0,0054	0,0370
OD → Perf. → Relationship OC	.03	.02	-0,0252	0,0892
IA → IU → Relationship OC	.06	.02	0,0111	0,1245
D → IU → Relationship OC	.07	.02	0,0247	0,1208
US → IU → Relationship OC	.07	.02	0,0291	0,1355
IL → IU → Relationship OC	.02	.01	-0,0042	0,0662
OD → IU → Relationship OC	.06	.02	0,0283	0,1090
DV: Partner related OC	Effect	Boot SE	LLCI	ULCI
IA → Perf. → Partner OC	.08	.03	0,0084	0,1576
D → Perf. → Partner OC	.07	.03	0,0173	0,1436
US → Perf. → Partner OC	.09	.03	0,0283	0,1689
IL → Perf. → Partner OC	.04	.01	0,0108	0,0798
OD → Perf. → Partner OC	.09	.02	0,0475	0,1583
IA → IU → Partner OC	.02	.03	-0,0327	0,0840
D → IU → Partner OC	.02	.02	-0,0196	0,0740
US → IU → Partner OC	.03	.02	-0,0219	0,0902
IL → IU → Partner OC	.02	.01	0,0015	0,0511
OD → IU → Partner OC	.03	.01	0,0029	0,0745

Completely standardized indirect effects used. IA=Impaired Autonomy schema domain, D=Disconnection schema domain, US=Unrelenting Standards schema domain, IL=Impaired Limits schema domain, OD=Other Directedness schema domain, Perf.=Perfectionism, IU=Intolerance of Uncertainty, Relationship OC=Relationship related obsessive-compulsive symptoms, Partner OC=Partner related obsessive-compulsive symptoms, BootSE=Standard error, LLCI=Lower level for confidence interval, ULCI=Upper level for confidence interval

intolerance of uncertainty did not have a mediating role in this relationship.

On the other hand, impaired limits and other-directedness domains did not have a direct effect on partner-related OC symptom levels. However, they predicted the increase in the partner-related OC symptom level by mediating individuals' perfectionism and intolerance to uncertainty levels. Model analysis findings for all schema domains were presented in Table 3.

In the tested model, standardized regression values and paths related to the mediation of intolerance to uncertainty in the relationship between all schema domains and relationship and partner-related OC symptoms were presented in Fig. 2. The standardized regression values and paths related to the mediation of perfectionism in the relationship between all schema domains and relationship and partner-related OC symptoms were presented in Fig. 3.



Note. Standardized regression coefficients used. * $p < .05$, ** $p < .01$, *** $p < .001$. *a1*; *b1*; *c1*; *c'1* implied the model analysis with relationship related obsessive-compulsive symptoms. *a2*; *b2*; *c2*; *c'2* implied the model analysis with partner related obsessive-compulsive symptoms.

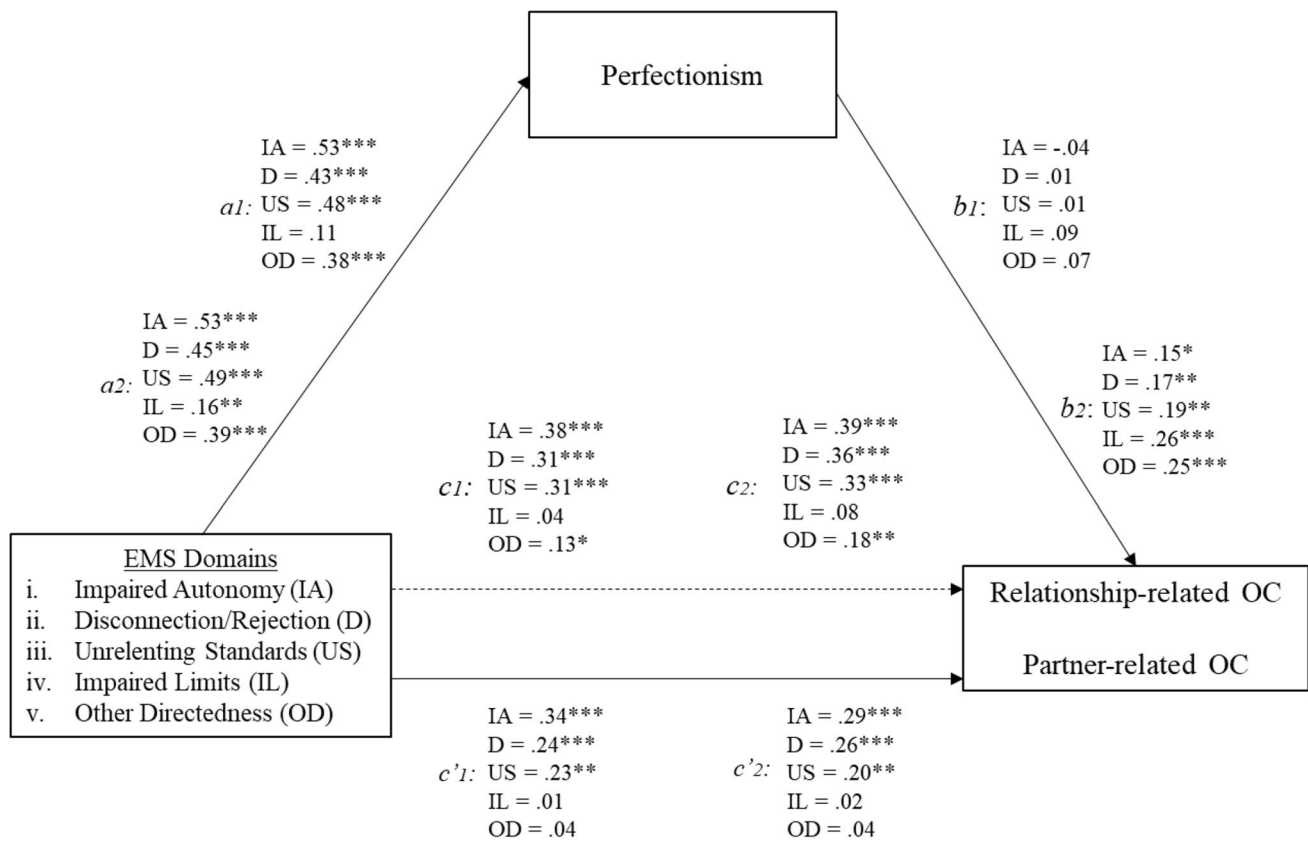
Fig. 2 Model analysis results and paths of relationship and partner related obsessive-compulsive symptoms with mediation of intolerance of uncertainty

Discussion

The current study aimed to examine the mediating roles of perfectionism and intolerance of uncertainty in the relationship between relationship and partner-related OC symptoms and EMS domains. The correlation findings showed positive and significant relationships between all schema domains and relationship-related and partner-related OC symptom levels. The only study examining the relationship between EMS schema domains and ROCD symptoms, Bakçepinar (2019) mainly focused on the correlations between partners' ROCD symptoms. Therefore, no research finding directly focused on EMS domains and ROCD symptoms. However, other studies showed that early maladaptive schemas are associated with OCD (e.g., Haaland et al., 2011; Yosefi et al., 2016) and many other psychopathologies (Çakır, 2007; Jovev & Jackson, 2004; Lobbetael et al., 2008; Nordahl et al., 2005). In this regard, it can be said that the findings are consistent with the literature. In addition, the findings that the schemas associated with OCD are also associated

with relationship and partner-related symptoms might also support the view that relationship and partner-related OC symptoms may be a sub-type of OCD (Doron et al., 2012a, 2012b, 2014; Trak, 2016).

For the correlation analysis findings between age and relationship-related OC symptoms, it was observed that as the age of the individuals decreased, the relationship-related OC symptoms increased. Arnett (2000) states that in emerging adulthood, which covers the ages of 18–25, compared to adolescence, people can search for deeper meaning and intimacy in romantic relationships; they think more about their relationships and partners. In addition, it was found that individuals in young adulthood may have more anxiety attachment patterns than those in late adulthood (Chopik et al., 2013; Chopik & Edelman, 2014; Segal et al., 2009). Considering that this age group constitutes the lower limit of the sample of the current study (age range of 18–58 in the current study), it is thought that people might have more doubts about their relationships, and the accuracy of their relationships is in line



Note. Standardized regression coefficients used. * $p < .05$, ** $p < .01$, *** $p < .001$. a_1 ; b_1 ; c_1 ; $c'1$ implied the model analysis with relationship related obsessive-compulsive symptoms. a_2 ; b_2 ; c_2 ; $c'2$ implied the model analysis with partner related obsessive-compulsive symptoms.

Fig. 3 Model analysis results and paths of relationship and partner related obsessive-compulsive symptoms with mediation of perfectionism

with the literature findings. When the results regarding the gender were examined, it was seen that both relationship and partner-related OC symptoms did not differ according to gender. Most studies on ROCD symptoms also report no gender difference (Bakçepinar, 2019; Cebeci, 2019; Doron et al., 2012a, 2012b; Trak, 2016). This shows that the findings related to gender are consistent with the literature. We also found that the increase in the relationship duration of the individuals was associated with a decrease in both relationship-related and partner-related OC symptoms.

Similarly, other studies also found that, as the duration of the relationship increases, there is a decrease in a relationship and partner-related symptoms (Trak, 2016). When the relationship durations were divided into categories such as short-medium-long, it was found that people with short relationship duration reported more relationship and partner-related OC symptoms compared to other groups (Bakçepinar, 2019). In literature, it is seen that at the beginning of the relationship, the person may have complex feelings and attitudes towards the relationship

and their partner; and thoughts such as doubting the relationship and/or partner may occur (Brickman, 1987). In addition, a study found that as the partners stayed longer in a relationship, their relationship satisfaction increased (Sprecher, 1999). Considering these findings, the longer the relationship, people may be more accepting of their partner and the partner's relationship experiences. They may be more confident and more stable in the correctness of relationships, the love of their partners, and themselves. Thus, even if they are experiencing any possible intrusive thoughts about their relationships and partners, this may not cause them anxiety and may not turn into obsessive thoughts.

Other correlation findings in the current study showed that the increase in each schema domain was associated with increased perfectionism and intolerance to uncertainty. Even though there were no empirical studies on this relationship, studies show that parental perfectionism may lead to perfectionist tendencies in children (Honjo et al., 1989; Lo, 1967; Rasmussen & Eisen, 1989; Rasmussen & Tsuang, 1986).

In addition, another study shows that individuals' insecure attachment patterns are also associated with perfectionism (Yıldırım, 2018). Since attachment patterns, parental attitudes, and behaviors can also be included in early experiences that play a role in the formation and development of early maladaptive schemas (Young et al., 2003), it can be said that the findings of the current study are in line with the literature. Similarly, studies show that the parent–child interactions are related to individuals' tendency to uncertainty and intolerance to uncertainty (Sorrentino et al., 1990; Yüksel, 2014; Zlomke & Young, 2009). Based on these findings, the increase in EMS domains, which are claimed to have developed with early experiences, might be related to the decrease in tolerance to uncertainty (increase in intolerance of uncertainty). In literature, it is seen that increases in the level of perfectionism are associated with an increase in the relationship and partner-related symptoms (Doron et al., 2012a, 2012b; Melli et al., 2015; Yıldırım, 2018). Similarly, studies show that increases in the level of intolerance to uncertainty are associated with an increase in the relationship and partner-related symptoms (Doron et al., 2016; Doron et al., 2012a, 2012b). The correlation results between the main variables of the current study were in the expected direction: significant and consistent with related findings in the literature.

Model Analyses

Since no study tested a model regarding the relationship between early maladaptive schemas and ROCD symptoms, the findings were discussed regarding the characteristics of early maladaptive schemas and related literature findings. For the model analysis results conducted with relationship-related OC symptoms, it was found that the increase in all schema domains (except for impaired limits) predicted an increase in perfectionist tendencies and intolerance to uncertainty; however, only intolerance to uncertainty played a mediating role in the relationship between the schema domains and relationship-related symptoms.

Considering the characteristics of the schemas in the impaired autonomy domain, the person's thoughts that the people in their life are unpredictable and that they can be abandoned at any moment may incite obsessive thoughts by directly creating doubts about their partner's love. This finding is in parallel with the findings of Bakçepinar (2019). At the same time, it is stated that people with high levels of anxious attachment have negative self-attribution related to their ability to cope with possible threats autonomously and their competence (Fraley & Shaver, 2000), and that anxious attachment patterns are also associated with high uncertainty intolerance in adulthood (Clark et al., 2020; Wright et al., 2017). Thus, such beliefs of the person about their relationship may also make people more vulnerable to uncertain

situations. It is thought that this increase in intolerance to uncertainty may predict the intrusive thoughts of the person by strengthening one's doubts regarding their partner's feelings.

Regarding the disconnection schema domain, these beliefs may directly increase suspicion that their partner does not really love the person because they are flawed. Studies suggest that in anxious attachment patterns, which are also associated with the content of EMSs, people may believe that they will not be with others when they need it and that their significant other will not support them (Mikulincer et al., 2003). Similarly, it is seen that people with anxiety attachment have a high intolerance to uncertainty and may be overly sensitive to possible signs of abandonment/rejection (Fraley & Shaver, 2000; Shaver & Mikulincer, 2014). In line with these findings, the slightest criticism from the partner or the usual arguments in the relationship might be perceived as a sign of rejection or not being truly loved by their partner. This, in turn, may reinforce their belief that they cannot find true love and compassion in this relationship, and it may play a role in the formation of intrusive thoughts by creating doubts about the love of the partner and the correctness of the relationship. Considering the characteristics of the unrelenting standards domain, the person may also set such high standards for their romantic relationship. In other words, the person may set unrealistic standards about how their relationship should be, and in the slightest problem that does not comply with the standards they have set, intrusive thoughts may arise regarding the relationship. Studies have shown that insecure attachment patterns (Clark et al., 2020; Wright et al., 2017), parent–child experiences, and controlling parental attitudes are associated with people's intolerance to uncertainty in adulthood (Sorrentino et al., 1990; Yüksel, 2014; Zlomke & Young, 2009). Similar early parent–child relationship patterns and parental attitudes are also reported for this schema domain (Young et al., 2003).

Regarding these findings, the person's desire to attain unrealistic standards to protect themselves and avoid criticism may also make the person more sensitive about the correctness of the relationship by triggering thoughts about "uncertainty being bad and intolerable", and "uncertainty leading to negative consequences". This may similarly increase their suspicions or intrusive thoughts about their partner's love. In addition to the schema domains mentioned above, considering the characteristics of the other-directedness schema domain, these attitudes alone may not be able to predict relationship-related OC symptoms. However, the failure to meet the person's expectations and the intolerance to mistakes might increase the person's intolerance to uncertainty, which may raise doubts about their expectations from the relationships and whether the person is truly loved by their partner.

Another important finding in the relationship-related OC model is that the relationship between all schema domains and relationship-focused OC symptoms is systematically mediated by intolerance to uncertainty, whereas perfectionism does not have a mediating effect (indirect effect). In other words, only intolerance of uncertainty played a significant mediating role in the relationship-related OC symptoms. As Doron and colleagues (2014) suggested, since relationships and love are inherently uncertain concepts, in the face of usual uncertainties and questions about whether the relationship is "correct", "if he/she found the right person", and whether their partner truly loves them; the person's intolerance to uncertainty may be more effective in the formation of obsessional intrusive thoughts on these issues, compared to perfectionism. Parallel to the current findings, Yıldırım (2018) found that perfectionism did not mediate the relationship between anxious and avoidant attachment types and relationship-related OC symptoms. Since attachment patterns are also an essential factor in early experiences within the concept of EMS, it is consistent with the current finding that perfectionism does not mediate relationship-related symptoms. Research regarding attachment and intolerance of uncertainty showed that heightened attachment anxiety and intolerance of uncertainty might also increase reassurance-seeking behaviors (Clark et al., 2020). In addition, since individuals with higher anxious attachment are hypersensitive to the signs of possible rejection and have negative attitudes about their coping mechanisms, they tend to behave in clinging behaviors and employ reassurance seeking in order to minimize possible relational threats (Mikulincer et al., 2003; Shaver & Mikulincer, 2014). Therefore, in terms of current findings, to eliminate such uncertainty, the person might constantly ask their partner if he/she loves him/her; they might compare with other relationships to test the truth of their intrusive thoughts. Hence, an increase in compulsive behaviors might be observed.

The model analysis results with partner-related symptoms showed that the increase in impaired autonomy, disconnection, and unrelenting standards schema domains predicted an increase in partner-related OC symptoms both by themselves and through perfectionist tendencies. However, impaired limits and other-directedness domains only predict an increase in partner-related OC symptoms by mediating intolerance to uncertainty and perfectionism.

In terms of perfectionism, for the impaired autonomy domain, the belief that the person is inadequate, incompetent, or indecisive (Young et al., 2003) is directly related to the belief that the person cannot make good decisions in choosing a partner, and that he/she may be unsuccessful in choosing one. As a result, it may lead them to develop various obsessive doubts about his/her partner's social and professional skills, intelligence, moral values, and physical appearance. This finding is in parallel with the research

findings in the literature (Bakçepinar, 2019). To cope with the beliefs about being inadequate, unsuccessful and to prevent this inadequacy, failure, and possible negative consequences, the person may become overly sensitive to mistakes, and this may increase the perfectionist tendencies in the person, making the person hypersensitive to the mistakes or flaws in their partner. Considering the characteristics of the schemas in the disconnection domain, the fact that the person sees himself/herself as defective, unloved, and different from others (Young et al., 2003) may lead them to have doubts about their chosen partners having such deficiencies or defects in certain areas and to develop obsessive thoughts directly. At the same time, the person may be developing beliefs that they need to be perfect so that others do not notice the flaws and deficiencies they believe they have, and they may be inclined to evaluate their partners based on the same unrealistic criteria. In addition, their efforts to be perfect for hiding their flaws may lead to intrusive thoughts about their partner's perfection as well. In literature, studies show that individuals with insecure attachment patterns might set unrealistic standards, have perfectionist tendencies, and make negative references to other people to hide their potential flaws (Mikulincer & Horesh, 1999; Mikulincer & Shaver, 2007). Yıldırım (2018) also found that both attachment anxiety and avoidance were related to increased perfectionistic tendencies and partner-related OC symptoms. Since attachment patterns are also crucial for early experiences that make up the EMS, an increase in perfectionism to hide their perceived flaws and deficiencies may also increase the person's doubts about their partner. For the unrelenting standards schema domain, people may be over-sensitive to the slightest defect or mistake in any area (like morality, physical appearance, intelligence, skill) that they directly observe in their partners, due to the belief that their partners should also have the same high standards, and this may increase the intrusive thoughts about their partner's perceived flaws. This schema domain may directly increase partner-related symptoms due to its characteristics, and it may also lead to an increase in partner-related OC symptoms by increasing the perfectionism of individuals since the schemas it contains are highly related to perfectionist tendencies (Young et al., 2003). Also, Trak (2016) found that depending on one's self-worth on the partner is also associated with the increase in partner-related symptoms. In line with this finding, the fact that the person perceives the flaws in their partner as a factor that can harm their perfectionist tendencies may also increase the symptoms of partner-related OC.

The impaired limits schema domain is generally associated with narcissistic features (Young et al., 2003). In literature, the results of a recent meta-analysis of 30 studies on narcissism and perfectionism showed that people set high goals, especially in grandiose narcissism, and may

have unrealistic expectations for others to support their own perfection (Smith et al., 2016). Therefore, individuals scoring high on the impaired limits domain may believe that their partners should also be perfect. Thus, the person may be more sensitive to the perceived flaws of their partner in various subjects such as professional and social skills, intelligence, and morality. For the other-directedness domain, one's certain expectations from the other party or the fact that one has a punishing and hard-forgiving attitude may lead one to develop perfectionist tendencies towards others, and it may increase one's expectations from their partner. Thus, even an ordinary situation that deviates from the person's expectations may increase the obsessive thoughts about the partner's skills, intelligence, or morality.

Another salient finding in the partner-related model is that perfectionism mediated the relationship between all schema domains and partner-related OC symptoms. However, intolerance to uncertainty did not mediate the relationship between all schema domains (except for impaired limits and other-directedness) and partner-related symptoms. Perfectionism playing a mediating role only in partner-related symptoms may be related to the content of the partner-related symptoms. In literature, perfectionist tendencies include unrealistic expectations and standards that a person creates for themselves and others (Hewitt & Flett, 1991), and perfectionist tendencies can be observed in relationship problems (Haring et al., 2003). Several studies show that perfectionism is a crucial factor in OCD (Frost et al., 1994; Frost & Steketee, 1997; Rheume et al., 1995) and relationship and partner-related OCD (Doron et al., 2012a, 2012b; Melli et al., 2018; Yıldırım, 2018). Also, attachment avoidance (Mikulincer & Horesh, 1999; Mikulincer & Shaver, 2007; Yıldırım, 2018) and attachment anxiety (Yıldırım, 2018) are found to be related to perfectionistic tendencies to others, which might aim to decrease self-deficiencies and imperfections. In line with previous research, the person may also experience perfectionist tendencies (being perfect, avoiding mistakes, excessively concerned over mistakes) on behalf of their partner. Thus, they may constantly pay attention to their partner's appearance, intelligence, morality, social and professional skills. So, the usual differences that the partner might have in one of these areas, which do not fit the person's expectations, may lead to obsessive thoughts and compulsive behaviors towards the partner. Yıldırım (2018) also found that perfectionism played a mediating role in the relationship between anxious and avoidant attachment types and partner-focused OC symptoms, which is also in line with the current findings. It was surprising that although the intolerance of uncertainty did not have a mediating role in other schema domains, its mediating effect was seen in the impaired limits and other-directedness domains. Since intolerance of uncertainty may play a role in developing OCD (OCCWG, 1997) and is associated with

many psychopathologies (Carleton et al., 2010; McEvoy & Mahoney, 2011; Sexton et al., 2003), this might also affect the model analysis with partner-related OC symptoms.

Since relationship and partner-related OC symptoms are a relatively new research area, only one study was concerned with relationship and partner-related OC symptoms and early maladaptive schemas (e.g., Bakçepinar, 2019). Therefore, the current study's findings will contribute to the literature in understanding which EMS domains play a role in developing relationship and partner-related OC symptoms and will help better understand relationship and partner-related symptoms in the context of schema therapy theory. The current study also showed that perfectionism and intolerance to uncertainty, which plays a role in developing and maintaining OCD (OCCWG, 1997), are crucial for understanding the relationship between EMS domains and relationship and partner-focused OC symptoms. This might contribute to the literature presenting a developmental model for the relationship and partner-related symptoms. In model analysis, it was found that only intolerance to uncertainty played a mediating role in relationship-related symptoms; however, in partner-related symptoms, predominantly perfectionism played a mediating role. This might suggest that different cognitive factors and tendencies may play a role in developing two sub-dimensions of the ROCD concept. In addition, it is the only empirical study that showed EMS domains predicted an increase in the perfectionist tendencies and intolerance of uncertainty levels of individuals depending on their unique characteristics. It is thought that the findings obtained from the current study may contribute to the understanding of experiential and cognitive factors that play a role in the development and maintenance of relationship and partner-related OC symptoms.

Even though the present study was the first to investigate the mediating role of perfectionism and intolerance of uncertainty between EMS domains and ROCD symptoms, it is not free of limitations. One significant limitation is that, as mentioned before, it is noteworthy that there are very few studies because ROCD symptoms are a relatively new field to be studied. However, as with OCD symptoms (Wheaton et al., 2013; Williams et al., 2017), there may be cultural differences in ROCD symptoms. Similarly, attachment styles and their appearance in romantic relationships may differ culturally (Wang et al., 2021). However, it seems that the majority of studies on ROCD appears to come from a single research group (e.g., Doron et al., 2012a, 2012b, 2013, 2014, 2016; Melli et al., 2011; 2015; Trak, 2016; Trak & İnözü, 2017). This might pose a limitation to the current study in this respect. For this reason, it was thought that future studies on ROCD symptoms should be tested in different cultures and samples in terms of the replicability, validity, and reliability of the ROCD concept. Another significant limitation is the mediation of perfectionism and intolerance

to uncertainty variables being included in the model independently. Therefore, it cannot be inferred whether these two variables, which might also be related to each other, have an interactive or serial effect on relationship and partner-related OC symptoms. Since the proposed model was tested for the first time, it would be essential to examine the independent roles of these cognitive dispositions. However, it may still be important for future studies to examine possible relations between perfectionism and intolerance to uncertainty within the proposed model with serial mediation or moderated mediation analyses.

Studies on OCD, perfectionism, and intolerance of uncertainty have shown that certain sub-dimensions of these variables play a more significant role than other sub-dimensions (e.g., Carleton et al., 2010; McEvoy & Mahoney, 2011; Rheaume et al., 1995). Similarly, certain sub-dimensions may play a more significant role in the relationship between ROCD symptoms and perfectionism; and between ROCD symptoms and intolerance to uncertainty variables. However, since these variables were included in the model as a total score, it is impossible to infer which sub-dimensions specifically play a role in developing ROCD symptoms. Therefore, future studies should examine the relations between subscales. Since a clinical sample was not used in the current study, it is not possible to infer how ROCD symptoms and other OCD sub-dimensions might be manifested by EMS domains and other cognitive tendencies in individuals diagnosed with OCD. For this reason, it is thought that it may be essential to test similar models with individuals diagnosed with OCD in future studies. In addition, considering that attachment is associated with both ROCD (Doron et al., 2012a, 2012b; Trak, 2016; Yıldırım, 2018) and EMSs (Bosmans et al., 2010; Mason et al., 2005); it may be valuable for future studies to test for the possible role of attachment styles in terms of its relation with EMSs and ROCD symptoms.

Moreover, most of the sample consists of female participants. Although there was no gender difference in the results of the current study and other related studies (Bakçepinar, 2019; Cebeci, 2019; Doron ve ark., 2012a, 2012b; Trak, 2016), it is also stated that there may be gender differences in the onset and appearance of symptoms in studies on OCD (Mathes et al., 2019). For this reason, it may be essential to compare separate models for male and female participants in future studies. The wide relationship duration ranges of the sample (between 1 and 433 months) may also have affected the findings. Thus, there is a need for more research with various samples to test whether present study findings could be replicable and generalizable. In addition, in a recent study, Ghomian et al. (2021) found that negative experiences (rape, cheating history) in people's previous relationship experiences were also associated with an increase in ROCD symptoms. Considering that the current study did not

evaluate the past relationships of individuals, future studies need to examine the possible effects of variables about past relationship experiences.

Another methodological consideration is that no causal inferences can be drawn from the model since the present study used a correlational design. It suggests a preliminary understanding of the possible etiological factors for ROCD symptoms, which are not previously tested. For future studies, examining the mechanisms of schema coping styles (surrender, avoidance, and overcompensation) in terms of relationship and partner-focused OC symptoms may also be necessary for understanding ROCD symptoms in schema therapy theory.

Conclusions

The current research aimed to test whether perfectionism and intolerance to uncertainty play a mediating role in the relationship between relationship and partner-related OC symptoms and early maladaptive schema domains. The model's findings suggested two etiological paths in which relationship and partner-related OC symptoms might be affected. It was observed that the increase in impaired autonomy, disconnection, and unrelenting standards schema domains, both directly and through cognitive factors, increased the individual's relationship and partner-related OC symptoms. Impaired limits and other-directedness schema domains may also increase relationship and partner focus symptoms, but only through cognitive factors.

Intolerance of uncertainty plays a vital role in the development of only relationship-related symptoms. However, perfectionist tendencies were found to play a significant role in the development of partner-related symptoms. This provided evidence that different cognitive tendencies may play a role in the etiology of relationship-related and partner-related symptoms.

Funding The authors received no financial support for the research, authorship, and/or publication of this article.

Data availability The datasets of the current study are available from the corresponding author on reasonable request.

Declarations

Consent to Participate Informed consent from participants was obtained before they started the investigation.

Ethical Statement All procedures performed in this study were in accordance with the ethical standards of the Başkent University Ethical Committee for Social and Humanities Sciences (Approval: 62310886-604.01.01-22916) and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Conflict of Interest The authors declare that they have no conflict of interest.

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