



“I can’t stop thinking about my child's flaws”: An investigation of parental preoccupation with their children's perceived flaws



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ABSTRACT

Parent-child obsessive-compulsive (OC) symptoms involve obsessive preoccupation on perceived flaws in one's child. Such preoccupation is often accompanied by compulsive behaviors aimed at alleviating the resulting distress. Parent-child OC symptoms can be construed as an additional presentation of Relationship Obsessive Compulsive Disorder (ROCD), a presentation of obsessive compulsive disorder (OCD) in which symptoms are centered on a significant other. In this study, a self-report scale for assessing parent-child ROCD symptoms (the PROC SI-PC) was created on the bases of an existing partner-focused ROCD scale. Confirmatory Factor Analysis conducted on a sample of 350 parents supported a five factor solution of the PROC SI-PC corresponding to five perceived-flaw domains: appearance, intelligence, competence, morality, and sociability-stability. The PROC SI-PC total score was associated with parental OCD and mood symptoms, and with parental stress. Moreover, the PROC SI-PC was associated with greater depression above and beyond the effect of parental OCD symptoms, and with greater parental stress above and beyond the effects of OCD symptoms and depression. Finally, the PROC SI-PC was linked to self-reported disability resulting from obsessive preoccupation of parents on their child's perceived flaws. The results indicate the parent-child OC symptoms may be a prevalent source of unique distress that is especially challenging for parents.

1. Introduction

Many parents consider their children's happiness and success as their main endeavor (Ablard & Parker, 1997). They attempt to increase their children's positive experiences and to prevent their children from enduring hardship and distress. For some parents, such attempts to avoid potential sources of future harm to their children may inadvertently lead to over-identification, preoccupation, and focus on particular attributes of their child that might endanger these goals. For instance, parents may be preoccupied with their child's intelligence, fearing the child would otherwise not be able to achieve economic security in the future. Similarly, parents wanting their child to avoid social exclusion may be over-concerned with the child's appearance or social skills.

In some cases, such common parental concerns may evolve into severe parental preoccupation focused on perceived physical, personality, or behavioral flaws of their children (Doron, Derby & Szepeswol, 2014). Such parental obsessive preoccupations may be understood as an additional form of Relationship Obsessive Compulsive Disorder (ROCD). ROCD is a presentation of obsessive compulsive disorder

(OCD) including obsessive compulsive (OC) symptoms centering on close or intimate relationships (Doron, Derby et al., 2014). In the context of romantic relationships, ROCD symptoms have been shown to be associated with significant disability and interference in personal and dyadic functioning (Doron, Mizrahi, Szepeswol, & Derby, 2014; Doron, Derby, Szepeswol, Nahaloni, & Moulding, 2016).

ROCD symptoms often involves obsessive doubts and preoccupations focusing on perceived physical, social, or personality flaws of the relationship partner (partner-focused symptoms; Doron, Derby, Szepeswol, & Talmor, 2012a). ROCD may also comprise doubts and preoccupations relating to the relationship itself including doubts regarding one's feelings towards the partner, the feel of the relationship (does it feel right), and/or the nature of the feelings of one's partner towards oneself (relationship-centered symptoms; Doron, Derby, Szepeswol, & Talmor, 2012b).

The principles governing the form and influence of ROCD symptoms in the romantic domain have been suggested to generalize to other important relational domains, including the relationship between parents and their children (Doron, Derby et al., 2014). Hence, obsessive preoccupation of parents with their children's flaws may take a similar

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form to obsessive preoccupation of individuals with their romantic partner's flaws, and involve similar distress. Indeed, our clinical experience suggests that individuals showing partner-focused ROCD symptoms in a specific domain (e.g., intelligence) may later demonstrate similar preoccupations towards their children's perceived flaws. In this paper, we investigate ROCD symptoms within the parent-child context. More specifically, we assess links between parental preoccupation with the child's perceived flaws (parent-child ROCD symptoms), negative parental mood, OCD symptoms, and parental distress.

1.1. Cognitive and behavioral characteristics of ROCD

ROCD symptoms may come in the form of thoughts (e.g., "Is she smart enough?"), images (e.g., memory of a specific act) and urges (e.g., to leave one's current partner; Doron, Derby et al., 2014). Such intrusions are generally ego-dystonic, as they contradict individuals' personal values (e.g., "appearance should not be important in selecting a partner") and/or subjective experience of the relationship (e.g., "I know she is not stupid, but I can't stop questioning her intelligence"; Doron & Derby, in press). These intrusions, therefore, are perceived as unacceptable and unwanted, and often bring about feelings of guilt and shame regarding their occurrence and/or content. ROCD symptoms also involve a wide range of compulsions. These compulsions may include repeated comparisons to other potential partners, checking of the partner's behaviors, and reassurance seeking. These compulsions are aimed at alleviating the distress caused by the unwanted intrusion (Doron, Derby et al., 2014).

Within the romantic context, ROCD symptoms have been associated with significant personal and relational consequences (Doron, Mizrahi et al., 2014; Doron et al., 2016). For instance, ROCD symptoms were linked with other OCD symptoms, negative affect, low self-esteem, low relationship satisfaction, attachment insecurities, and impaired sexual functioning (Doron et al., 2012a, 2012b, 2016; Doron, Mizrahi et al., 2014). ROCD symptoms also significantly predicted relationship dissatisfaction and depression over-and-above common OCD symptoms and other mental health and relationship insecurity measures (Doron et al., 2012a, 2012b; Szepeswol, Shahar, & Doron, 2016). In a recent study comparing OCD, ROCD, and community controls, Doron et al. (2016) found similar levels of interference in functioning, distress, resistance attempts and degree of perceived control in both clinical groups.

1.2. Parent-child ROCD symptoms

Parent-child ROCD symptoms may take a similar form to partner-focused ROCD symptoms (Doron et al., 2012a). Namely, parents may experience unwanted thoughts (e.g., "Is my child smart enough?") and images (e.g., memory of a specific instance where the child "failed") pertaining to their child's perceived flaws. These thoughts and images may contradict the parent's own values (e.g., "All children should be accepted no matter their flaws) and/or subjective experience (e.g., "I know my child is doing well in school, but I can't stop questioning his/her intelligence"), thereby causing feelings of guilt and shame. Parent-child ROCD symptoms may also involve compulsions, including repeated comparisons of the child to other children, including siblings, checking of the child's behaviors, and reassurance seeking regarding the child's competencies and perceived flaws.

Parent-child ROCD symptoms focused on children's physical appearance have been previously described in the context of BDD by proxy (Greenberg et al., 2013). For instance, Josephson and Hollander (1997) described a 39 year-old married individual preoccupied with his children's facial and body hair. This individual described frequent, intrusive, anxiety provoking thoughts and urge to check his children's faces and sometimes their bodies. Bakhla, Prakriti, and Kumar (2012) reported a case of a 28-year-old woman diagnosed with BDD that attempted abortion fearing her baby would share her perceived ugliness.

Following her daughter's birth, she sought continuous reassurance and compulsively checked her daughter's perceived facial deformity, reporting significant guilt and distress for passing her own ugliness to her daughter. In fact, most reports are consistent with our clinical experience suggesting parent-child ROCD symptoms may be associated with significant reported parental distress. Thus, preoccupation with one's child alleged faults may be associated with disabling personal distress that interferes with the individual's parenting and with dyadic, social, and occupational functioning. Although similar in some ways to BDD by proxy, parent-child ROCD symptoms refer to obsessional preoccupation with a wider variety of the child's flaws (e.g., intelligence, sociality, morality, etc.).

1.3. The current research

Although parent-child OC symptoms have been observed in clinical settings (Doron, Mizrahi et al., 2014), systematic research has been hampered by the lack of measurement tools. In this study we examined the factor structure of the Partner Related Obsessive Compulsive Symptoms Inventory Parent-Child version (PROCSI-PC), a new measure of parent-child OC symptoms. In addition, we examined the construct and incremental predictive validity of the PROCSI-PC, and its relation to self-reported interference in functioning.

In accordance with common practice in studies of OCD (Abramowitz et al., 2014), the sample used in the present research consisted of non-clinical participants. Similarly to individuals who are clinically diagnosed with OCD, non-clinical participants tend to engage in compulsive behaviors to alleviate distress (e.g., Muris, Merckelbach, & Clavan, 1997). Furthermore, taxometric studies of OCD (e.g., Haslam, Williams, Kyrios, McKay, & Taylor, 2005) have found that OCD symptoms and OC-related beliefs are best conceptualized as continuous dimensional rather than categorical.

This study had four aims. First, we examined the factor structure of the PROCSI-PC using confirmatory factor analysis (CFA). Second, we evaluated the construct validity of the PROCSI-PC by examining its relation with general OCD symptoms (e.g., checking and obsessions), mood (e.g., depression, anxiety, and stress), and parenting stress. Third, we examined the incremental contribution of the PROCSI-PC to the prediction of parenting stress and mood beyond the contribution of more common OCD symptoms and mood. Finally, we investigated self-reported functional disability including time spent, distress and interference with functioning due to parent-child ROCD symptoms.

2. Method

2.1. Participants

The sample consisted of 350 individual American parents from the general population (243 mothers ranging in age from 30 to 63 years, $M = 39.09$; and 107 fathers ranging in age from 30 to 56, $M = 40.79$). In order to facilitate parental reporting, parent-child ROCD symptoms focused on their eldest child (168 daughters and 182 sons ranging in age from 12 to 18, $M = 14.68$). Parents in the sample had an average of 2.36 children. About half of parents had at least a 4-year university degree.

2.2. Materials and procedure

Participants were recruited via *MTurk.com*, an Amazon.com online survey platform. Following the completion of an online informed consent form, participants completed several online questionnaires. The order of the questionnaires was randomized. When answering questionnaires relating to parent-child ROCD symptoms, participants were asked to refer to their first born only. Participants were requested to complete the study in one session and were reimbursed for their time.

2.2.1. Parent-child OC symptoms

The items of the Partner-Related Obsessive-Compulsive Symptoms Inventory (PROCSI; Doron et al., 2012a) were reworded to apply to parents' obsessions and compulsions regarding their children. The resulting parent-child PROCSI (PROCSI-PC) is a 24-item self-report measure of obsessions and compulsions focused on the perceived flaws of one's child. These include appearance flaws (e.g., "I am bothered by thoughts regarding the flaws in my child's physical appearance"), character flaws (e.g., "I am constantly bothered by doubts about my child's morality"), psychological flaws (e.g., "I keep examining whether my child acts in a strange manner"), intellectual flaws (e.g., "the thought that my child is not intelligent enough bothers me greatly"), flaws in social functioning ("thoughts about my child's poor functioning in social situations bother me"), and low competence ("I keep looking for evidence of my child's potential occupational success"). Participants rated the extent to which such thoughts and behaviors describe their experiences on a scale ranging from 1 (not at all) to 5 (very much).

2.2.2. Mood symptoms

We used the short form of the Depression Anxiety Stress Scale (DASS, Antony, Bieling, Cox, Enns, & Swinson, 1998), which is a 21-item self-report questionnaire listing negative emotional symptoms in three subscales: depression, anxiety, and stress. Ratings were made on a scale ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much*). Scores were created by averaging the relevant items for depression (Cronbach's $\alpha = .92$), anxiety (Cronbach's $\alpha = .88$), and stress (Cronbach's $\alpha = .90$).

2.2.3. General obsessive compulsive symptoms

We used the Obsessive-Compulsive Inventory (OCI-R; Foa et al., 2002), which is an 18-item self-report questionnaire. Participants rated the degree to which they were bothered or distressed by OCD symptoms in the past month on a 5-point scale from 0 (*not at all*) to 4 (*extremely*). The OCI-R assesses OCD symptoms across six factors: (1) washing, (2) checking/doubting, (3) obsessing, (4) mental neutralizing, (5) ordering, and (6) hoarding. Previous data suggested that the OCI-R possesses good internal consistency for the total score (alphas ranged from .81 to .93 across samples) although internal consistency was less strong for certain subscales in nonclinical participants (.34 for mental neutralizing and .65 for checking; Foa et al., 2002). Test-retest reliability has been found to be adequate (.57–.91 across samples; Foa et al., 2002). An OCI-R score was computed by averaging all items (Cronbach's $\alpha = .93$).

2.2.4. Parental stress

We used the Parental Stress Scale (PSS, Berry & Jones, 1995), which is an 18-item self-report scale including positive (emotional benefits, self-enrichment, personal development) and negative (demands on resources, opportunity costs and restrictions) experiences of parenting. Participants rated their agreement with each item on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores for positive (Cronbach's $\alpha = .86$) and negative (Cronbach's $\alpha = .86$) parenting experiences were created by averaging the positive and negative items, respectively.

2.2.5. Self-reported disability

Self-reported disability due to parent-child ROCD symptoms including time spent, interference in functioning, distress, and perceived reasonability ratings were assessed using four severity questions taken from the self-report version (Baer, 1991; Sorce & Henriques, 1993) of the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS; Goodman, Price, Rasmussen, Mazure, Delgado & Heninger, 1989). Parents were asked to respond to four questions: (1) "how much of your time is occupied by obsessive thoughts about your eldest child's appearance, personality, or aptitude?" on a scale from 0 (*none*) to 5 (*more than 8 h per day*); (2) "If you do experience such obsessive thoughts, to what extent do they interfere with functioning in your social, work, or other roles?" on a scale

Table 1
Y-BOCS Response frequencies.

How much of your time is occupied by obsessive thoughts about your eldest child's appearance, personality, or aptitude?	n	%
1. None	157	45.0
2. Less than one hour per day	159	45.6
3. 1–3 h per day	29	8.3
4. 3–8 h per day	3	.9
5. More than 8 h per day	1	.3
If you do experience such obsessive thoughts, to what extent do they interfere with functioning in your social, work, or other roles?		
1. Not at all	264	77.0
2. Slight interference, but no impairment	65	19.0
3. Definite interference, but manageable	12	3.5
4. Substantial interference	2	.6
5. Extreme interference, incapacitating	0	0
If you do experience such obsessive thoughts, how much distress do they cause you?		
1. None	217	63.1
2. Mild, not too disturbing	87	25.3
3. Moderate, disturbing, but still manageable	38	11.0
4. Severe, very disturbing	2	.6
5. Extreme, near constant and disabling distress		
If you do experience such obsessive thoughts, do you think they are reasonable or rational?		
1. I think my obsessions are unreasonable or excessive	12	7.5
2. I think my obsessions are unreasonable or excessive, but I'm not completely convinced that they aren't necessary	24	14.9
3. I think my obsessions may be unreasonable or excessive	9	5.6
4. I don't think my obsessions are unreasonable or excessive	77	47.8
5. I am sure my obsessions are reasonable, no matter what anyone says	39	24.2

from 0 (*not at all*) to 5 (*extreme interference, incapacitating*); (3) "If you do experience such obsessive thoughts, how much distress do they cause you?" on a scale from 0 (*none*) to 5 (*near constant and disabling distress*); and (4) "If you do experience such obsessive thoughts, do you think they are reasonable or rational?" on a scale from 0 (*I think my obsessions are unreasonable or excessive*) to 5 (*I am sure my obsessions are reasonable, no matter what anyone says*). Participants who indicated in the first question that they do not have obsessive thoughts about their eldest child were not shown the other three questions.

3. Results

3.1. Y-BOCS

Participants' responses to the Y-BOCS items indicated that parent-child ROCD symptoms are not uncommon (see Table 1). A total of 9.5% of the participants in the sample reported at least 1–3 h of daily preoccupation with their children's appearance, personality, or aptitude, 4.1% reported that these obsessive thoughts cause definite interference to their functioning, and 11.6% reported at least moderate distress as a result of such obsessions. Moreover, of those who reported having at least some child-focused obsessive thoughts ($N = 161$), 28% indicated that they believe these obsessions are unreasonable or excessive.

3.2. PROCSI-PC factor analysis

In order to examine the factor structure of the PROCSI-PC, we conducted confirmatory factor analysis (CFA). We specified a model with six factors, each with four indicators. These factors represented obsessions and compulsions focused on your child's intelligence, appearance, competence, morality, sociability, and emotional stability. Because the ordinal 5-point response scale for PROCSI-PC items did not produce normally distributed variables, we used a robust weighted least squares estimation method that is appropriate for ordinal variables and does not assume multivariate normality (WLSMV; Muthen & Muthen, 2012). The six factor model showed moderate to good fit (CFI = .96,

Table 2
PROCSI-PC Items and CFI Factor Loadings.

Item	Loading
Intelligence	
I question whether my child is smart or intelligent enough	.63
I seek reassurance (from friends, family, etc.) about whether my child is smart/intelligent enough	.83
I compare my child's intelligence to that of other children	.79
The thought that my child is not intelligent enough bothers me greatly	.78
Appearance	
When I am with my child, I find it hard to ignore his/her physical flaws	.90
I am bothered by thoughts regarding the flaws in my child's physical appearance	.89
When I think of my child, I think about the flaw in his/her appearance	.92
I feel an uncontrollable urge to compare my child's physical flaws with those of other children	.92
Competence	
I keep comparing my child's ability to "achieve something" in life to that of other children	.90
I am preoccupied with evaluating my child's ability to "make something of himself/herself"	.77
When I think of my child I wonder whether he/she is the sort of person who can succeed in the modern world	.81
I keep looking for evidence of my child's potential occupational success	.85
Morality	
I am bothered by doubts about my child's morality	.91
The thought that my child is not a "good and moral" person bothers me	.79
I keep looking for evidence that my child is moral enough	.85
I'm constantly examine my child's morality level	.75
Sociability-Stability	
I repeatedly evaluate my child's social functioning	.32
I am troubled by thoughts about my child's social skills	.76
Thoughts about my child's poor functioning in social situations bother me	.83
I keep trying to compensate for my child's social deficiencies	.91
The thought that my child is emotionally unbalanced is hard for me to dismiss	.81
I find it difficult to control my tendency to compare my child's emotional responses to those of other children	.83
I am bothered by doubts about my child's emotional stability	.89
I keep examining whether my child acts in a strange manner	.82

Table 3
Means, Standard Deviations, and Inter-Correlations between PROCSI-PC Scales.

	1	2	3	4	5	6
1. Intelligence	.75	.81	.87	.69	.71	
2. Appearance	.60	.89	.66	.70	.74	
3. Competence	.64	.47	.84	.62	.73	
4. Morality	.52	.51	.50	.83	.69	
5. Sociability-Stability	.56	.57	.62	.54	.89	
6. Total	.80	.74	.81	.75	.88	.94
<i>M</i>	1.73	1.33	2.21	1.73	2.00	1.83
<i>SD</i>	.79	.66	.96	.84	.79	.65

Note. Correlations between mean factor scores are displayed below the diagonal. Correlations between CFI factors are displayed above the diagonal. Cronbach's α s are displayed on the diagonal. All correlations are significant ($p < .001$).

TLI = .96, RMSEA = .07). However, the sociability and emotional stability factors were highly correlated ($r = .93$). A more parsimonious 5-factor model that combined these two factors yielded equivalent fit indices (CFI = .96, TLI = .96, RMSEA = .07), and was therefore retained (see Table 2 for items and factor loadings). Averaging the items for each factor yielded five internally consistent factor scores. The five factors specified in the CFA were highly and similarly related to each other, suggesting a higher order single factor. Therefore, we also computed a total PROCSI-PC score by averaging all items. Cronbach's alphas, descriptive statistics, and inter-factor correlations are displayed in Table 3.

Table 4
Zero-order and Unique Associations between Parents' and Children's Demographics and PROCSI-PC Total Score.

	<i>r</i>	β	Lo ₉₅	Up ₉₅
Parent's gender	-.07	-.06	-.17	.04
Parent's age	-.11*	-.13*	-.23	-.03
Parent's education	-.01	.00	-.12	.13
No. of Children	-.11*	-.11*	-.23	-.01
Child's gender	-.09	-.09	-.19	.01
Child's age	-.03	.04	-.07	.15

Note. Parent's and child's Gender: 1 = male, 2 = female; 95% bias-corrected and accelerated bootstrapped confidence intervals: Lo₉₅ = Lower bound, Up₉₅ = Upper bound. * $p < .05$.

3.3. Associations with parent and child characteristics

We computed zero-order correlations between the PROCSI-PC total score and participants' gender, age, education level, and number of children. Parental age and the number of children were the only significant correlates of PROCSI-PC scores, such that older parents and parents who had more children tended to report less child-focused OC symptoms (see Table 4). To make sure that these correlations are not redundant, we regressed the PROCSI-PC total score on all parental demographic variables and the target (eldest) child's gender and age simultaneously. Parental age and the number of children emerged as the only unique predictors of the PROCSI-PC total score. No significant zero-order or unique associations were found between the target child's gender or age and the PROCSI-PC total score (see Table 4).

3.4. Associations with general OC symptoms, parental stress, and mood

Zero-order correlations between the PROCSI-PC total score and the OCI-R total score, the DASS depression, anxiety, and stress scores, and the PSS positive and negative subscales are displayed in Table 5. As expected, child-focused OC symptoms were moderately related to general OC symptoms, as well as to depression, anxiety, and stress. Moreover, child-focused OC symptoms were positively related to negative feelings about parenting and negatively associated with positive feelings about parenting.

3.5. Unique associations with parental stress and depression

In order to confirm that the associations between child-focused OC symptoms and positive or negative feelings about parenting are not accounted for by other psychological symptoms, we regressed the PSS positive and negative subscale scores on the PROCSI-PC total score, the OCI-R total score, and the DASS depression score simultaneously. As expected, child-focused OC symptoms were uniquely associated with positive and negative feelings about parenting above and beyond general OC-symptoms and depressive symptoms (see Table 6).

We also wanted to examine whether child-focused OC symptoms are associated with unique distress that is not accounted for by general OC symptoms. Therefore, we regressed the DASS depression score on the

Table 5
Zero-Order Correlations between Study 1 Variables.

	1	2	3	4	5	6
1. PROCSI-PC Total						
2. OCI-R Total	.59					
3. DASS Depression	.45	.60				
4. DASS Stress	.49	.62	.75			
5. DASS Anxiety	.51	.71	.75	.71		
6. PSS positive	-.36	-.30	-.32	-.33	-.30	
7. PSS negative	.52	.36	.42	.46	.37	-.42

Note. All correlations are significant ($p < .001$).

Table 6
Regression of Parental Stress Subscales and Depression on Parent-Child ROCD Symptoms, General OC Symptoms, and Depression.

	PSS positive			PSS negative			DASS Depression		
	β	Lo ₉₅	Up ₉₅	β	Lo ₉₅	Up ₉₅	β	Lo ₉₅	Up ₉₅
PROCSI-PC Total Score	-.25***	-.39	-.11	.43***	.33	.54	.15**	.02	.28
OCI-R Total Score	-.05	-.20	.08	-.04	-.16	.08	.51***	.36	.65
DASS Depression	-.18**	-.32	-.04	.25***	.12	.37			

Note. 95% bias-corrected and accelerated bootstrapped confidence intervals: Lo₉₅ = Lower bound, Up₉₅ = Upper bound.

** $p < .01$.

*** $p < .001$.

PROCSI-PC total score and the OCI-R total score simultaneously. Although general OC symptoms were more strongly related to depressive symptoms than child-focused OC symptoms, the latter still explained a unique portion of the variance in depressive symptoms, suggesting the child-focused symptoms are associated with unique distress above and beyond general OC-symptoms (see Table 6).

3.6. Y-BOCS and PROCSI

Participants' PROCSI-PC total scores were strongly related to their responses to the time, interference, and distress items ($r_s = .60, .50, \& ; .54$, respectively, $p_s < .001$).

4. Discussion

ROCD symptoms were suggested to occur in a variety of close interpersonal relationships (Doron, Mizrahi et al., 2014). Until recently, however, ROCD research has focused almost exclusively on ROCD symptoms in the context of romantic relationships. Within this context, ROCD symptoms have been linked to significant personal and dyadic difficulties in non-clinical and clinical cohorts (Doron et al., 2016; Doron, Derby et al., 2014). The goal of the present research was to extend previous findings and explore relationship-related OC phenomena within the parent-child context.

With this aim in mind, the Partner-Related Obsessive-Compulsive Inventory (PROCSI; Doron et al., 2012a) was adapted to the parent-child context and its psychometric properties were assessed. Parental reports of disability due to parent-child ROCD symptoms were also examined. Findings indicated the parent-child version of the PROCSI (the PROCSI-PC) was internally consistent and can be used with one global factor or with five factors. The 5-factor solution combined two separate factors of the original PROCSI – sociability and emotional stability. As parents were requested to report about their child, the distinction between these two life domains may have been blurred. In fact, our study restricted the eldest child's age to between 12 and 18 years. Different factors may combine with different ages of children. Future studies would benefit from examining the PROCSI-PC factor structure for a different range of child ages.

The PROCSI-PC showed theoretically-coherent significant but moderate associations with general OCD symptoms and mood. The PROCSI-PC also predicted parental depression over and above parental OCD symptoms. This indicates the PROCSI-PC captures a distinct theoretical construct that has unique predictive value. Importantly, however, these findings emphasize the possible negative impact of parent-child ROCD symptoms on parental well-being. Consistent with this, parental reports from our study indicated that parent-child ROCD symptoms were often experienced as unreasonable and excessive, time consuming, distressing, and have caused interference in functioning for a significant portion of parents.

The PROCSI-PC significantly predicted parenting stress over and above parental OCD and depression. Parent-child ROCD symptoms may diminish parents' ability to enjoy the parenting experience and increase their day to day stress. Moreover, such obsessive parental behaviors

directed towards the child may also be disruptive to the parent-child relationship and the attachment bond promoting depression, anxiety, stress, and OCD symptoms in parent and child alike. Indeed, findings suggest that children of parents with OCD, where parental symptoms may not be directly related to the child, experience difficulties within the parent-child relationship (Challacombe & Salkovskis, 2009; Griffiths, Norris, Stallard, & Matthews, 2012). Research has also shown that mothers with OCD tend to express less warmth toward their children, show more criticism, and promote less autonomy in interactions with their child compared with healthy controls (Challacombe & Salkovskis, 2009). Children of parents with OCD have also shown higher levels of depression and anxiety symptomatology (Black, Gaffney, Schlosser, & Gabel, 2003). Thus, our findings highlight the possible disabling nature of parent-child ROCD symptoms for the parent and their possible impact on the parent-child relationships.

Parent-child ROCD symptoms are a form of ROCD centering on the parent-child relationship. Insights regarding the maintenance and development of parent-child ROCD may be gained, therefore, from research and theory related to partner-focused ROCD symptoms (Doron et al., 2012a; Doron, Mizrahi et al., 2014; Doron & Szepeswol, 2015). Such research suggests that like partner-focused ROCD symptoms (and other forms of OCD), parent-child ROCD symptoms are a result of dysfunctional responses to commonly occurring intrusive thoughts (Doron, Mizrahi et al., 2014; Rachman, 1997). Catastrophic appraisals of these intrusions increase selective attention and the use of ineffective strategies in response to their occurrence (i.e., compulsive behaviors) paradoxically exacerbating their frequency and emotional impact.

Also implicated in the development and maintenance of partner-focused ROCD symptoms are OCD-related maladaptive beliefs (e.g., inflated responsibility/over-estimation of threat, perfectionism/intolerance for uncertainty, importance/control of thoughts), more specific maladaptive beliefs (e.g., catastrophic perceptions of being in the wrong relationship and fear of regret; Doron, Mizrahi et al., 2014; Doron et al., 2016) and over-reliance of one's self-esteem on the partner's perceived value (Doron & Szepeswol, 2015). Similarly, parent-child ROCD symptoms may be associated with OCD-related maladaptive beliefs (e.g., inflated sense of responsibility and importance of thought) and more specific maladaptive beliefs (e.g., extreme fears of being an inadequate parent and over-estimation of the consequences of day-to-day experiences for the later development and success of the child). In partner-focused ROCD symptoms, fear of regret is often associated with fear of leaving the right partner or fear of staying with the wrong partner. In the parent-child context such fears and doubts are more likely to focus on fears of doing the wrong thing or not doing the right thing to help the child lead a happy successful life.

Previous research has shown that partner-focused ROCD symptoms are associated with self-perceptions that are over-reactive to perceived partner's value (Doron & Szepeswol, 2015). Likewise, susceptibility to parent-child ROCD symptoms may be associated with child-value contingent self-worth. This self-vulnerability can be defined as parents' over-reliance on the perceived value of their child as a source of self-worth. Such over-reliance on the child's perceived value would increase dysfunctional responses to child-related intrusive thoughts promoting

their escalation into obsessive preoccupation.

Nevertheless, important differences exist between parent-child relationships and romantic relationships. The possibility of choosing whether to terminate the relationships does not exist in the parent-child context, but does in romantic relationships. Contrary to romantic relationships, parent-child relationships are by nature hierarchical and non-symmetrical. In addition to the distress and dysfunction such symptoms may cause parents, these differences imply parent-child ROCD symptoms may significantly impact the child's well-being and mental health. Future research would benefit from assessing associations between parent-child ROCD symptoms and variables related to children's well-being and psychopathology.

Our study has several limitations. An important limitation is the use of community participants. Recent reviews support the utility of non-clinical participants in OCD related research (e.g., Abramowitz et al., 2014) and taxometric findings suggest a dimensional rather than categorical view of OC-related beliefs and symptoms (Haslam et al., 2005). Nevertheless, individuals with parent-child ROCD may differ from non-clinical participants in symptom-related impairment. Future research would benefit from examining parent-child ROCD symptoms in OCD and ROCD cohorts. Future studies on clinical samples would also benefit from assessing the links between parent-child ROCD symptoms, maladaptive beliefs, and child-value self-contingencies.

Online self-report has been associated with higher reporting of sensitive information in some populations (e.g., Burns et al., 2013). However, the associated shame and guilt associated with parental reporting related to their children perceived flaws may have led to under-reporting of symptoms/disability and recruitment bias. Also, our focus on parental reporting on the eldest child may have led to under-reporting of parent-child ROCD symptoms. Future studies may consider including guilt and shame measures and using interview based assessments. Such studies may allow parents to choose the child they report on, particularly when using clinical samples. An additional limitation is the use of a cross-sectional sample. This design limits our ability to make causal inferences. Future studies using longitudinal or experimental designs should help reveal the causal links between different types of obsessive compulsive symptoms and other related constructs such as mood symptoms and parental stress.

Taking into account these limitations and pending replication of our findings with a clinical cohort, our results may have important theoretical and clinical implications. To our knowledge, this is the first study examining parent-child ROCD symptoms and their associations with parents' stress, mood and OCD symptoms. In fact, our findings suggest that parent-child ROCD symptoms are significantly related to other parental OCD symptoms. Our investigation may increase awareness and clinical focus on this yet unstudied phenomena and its implications on parents' and children's well-being. The adaptation of the PROCSI to the parent-child context enables more systematic research of this previously unexplored phenomenon, its correlates, and associated impairments. Our adapted measure allows to easily and quickly assesses the severity of parent-child ROCD symptoms including obsessions, checking, and reassurance seeking behaviors, and has the potential to increase clinical awareness of patients with such clinical presentations.

Importantly, being preoccupied with a particular characteristic of one's child does not automatically suggest a diagnosis of parent-child ROCD. Like in other forms of ROCD, careful professional evaluation should be undertaken with particular emphasis on the severity and interference of the symptoms, their maintaining mechanisms, other ROCD and related symptoms (e.g., partner-focused, BDD, Depression), and related family dynamics. In addition to common CBT techniques used to address such ROCD symptoms, associated beliefs, and self-vulnerabilities (e.g., exposure and response prevention, cognitive reconstruction; Doron & Derby, in press), we believe that challenging parental attachment insecurities (e.g., fear of abandonment) may also

increase therapeutic efficacy when dealing with parent-child ROCD symptoms.

References

- Ablard, K. E., & Parker, W. D. (1997). Parents' achievement goals and perfectionism in their academically talented children. *Journal of Youth and Adolescence*, 26(6), 651–667.
- Abramowitz, J. S., Fabricant, L. E., Taylor, S., Deacon, B. J., McKay, D., & Storch, E. A. (2014). The relevance of analogue studies for understanding obsessions and compulsions. *Clinical Psychology Review*, 34(3), 206–217.
- Antony, M. M., Bieling, P. J., Cox, B. J., Enns, M. W., & Swinson, R. P. (1998). Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. *Psychological Assessment*, 10(2), 176–181.
- Baer, L. (1991). *Getting control: Overcoming your obsessions and compulsions*. New York, NY: Plume. Baer, L., Brown-Beasley, M. W.
- Bakula, A. K., Prakriti, S., & Kumar, P. A. (2012). A case of body dysmorphic disorder by proxy. *The Primary Care Companion for CNS Disorders*, 14. <http://dx.doi.org/10.4088/PCC.12l01347>.
- Berry, J. O., & Jones, W. H. (1995). The parental stress scale: Initial psychometric evidence. *Journal of Social and Personal Relationships*, 12(3), 463–472.
- Black, D. W., Gaffney, G. R., Schlosser, S., & Gabel, J. (2003). Children of parents with obsessive-compulsive disorder—a 2-year follow-up study. *Acta Psychiatrica Scandinavica*, 107(4), 305–313.
- Burns, J. M., Davenport, T. A., Christensen, H., Luscombe, G. M., Mendoza, J. A., Bresnan, A., & Hickie, I. B. (2013). *Game on: Exploring the impact of technologies on young men's mental health and wellbeing. Findings from the first young and well national survey*. Melbourne: Young and Well Cooperative Research Centre, 1–76.
- Challacombe, F., & Salkovskis, P. (2009). A preliminary investigation of the impact of maternal obsessive-compulsive disorder and panic disorder on parenting and children. *Journal of Anxiety Disorders*, 23(7), 848–857.
- Doron, G., & Derby, D. (in press). Assessment and treatment of relationship-related OCD symptoms (ROCD): A modular approach. In J. S. Abramowitz, D. McKay, & E. A. Storch (Eds.), *Handbook of obsessive-compulsive disorder across the lifespan*. Hoboken, NJ: Wiley.
- Doron, G., Derby, D., Szepsenwol, O., Nahaloni, E., & Moulding, R. (2016). Relationship Obsessive-compulsive Disorder (ROCD): Interference, symptoms, and maladaptive beliefs. *Frontiers in Psychiatry*, 7, 58.
- Doron, G., Derby, D., Szepsenwol, O., & Talmor, D. (2012aa). Flaws and all: Exploring partner-focused obsessive-compulsive symptoms. *Journal of Obsessive-Compulsive and Related Disorders*, 1, 234–243.
- Doron, G., Derby, D., Szepsenwol, O., & Talmor, D. (2012bb). Tainted love: Exploring relationship-centered obsessive compulsive symptoms in two non-clinical cohorts. *Journal of Obsessive-Compulsive and Related Disorders*, 1, 16–24.
- Doron, G., Derby, D. S., & Szepsenwol, O. (2014). Relationship obsessive-compulsive disorder (ROCD): A conceptual framework. *Journal of Obsessive-Compulsive and Related Disorders*, 3, 169–180.
- Doron, G., Mizrahi, M., Szepsenwol, O., & Derby, D. S. (2014). Right or flawed: Relationship obsessions and sexual satisfaction. *The Journal of Sexual Medicine*, 11(9), 2218–2224.
- Doron, G., & Szepsenwol, O. (2015). Partner-focused obsessions and self-esteem: An experimental investigation. *Journal of Behavior Therapy and Experimental Psychiatry*, 49, 173–179.
- Foa, E. B., Huppert, J. D., Leiberg, S., Langner, R., Kichic, R., Hajcak, G., & Salkovskis, P. M. (2002). The Obsessive-Compulsive Inventory: Development and validation of a short version. *Psychological Assessment*, 14(4), 485.
- Goodman, W. K., Price, L. H., Rasmussen, S. A., Mazure, C., Delgado, P., Heninger, G. R., et al. (1989). The Yale-brown obsessive compulsive scale. II. validity. *Archives of General Psychiatry*, 46, 1012–1016.
- Greenberg, J. L., Falkenstein, M., Reuman, L., Fama, J., Marques, L., & Wilhelm, S. (2013). The phenomenology of self-reported body dysmorphic disorder by proxy. *Body Image*, 10(2), 243–246.
- Griffiths, J., Norris, E., Stallard, P., & Matthews, S. (2012). Living with parents with obsessive-compulsive disorder: Children's lives and experiences. *Psychology and Psychotherapy: Theory, Research and Practice*, 85(1), 68–82.
- Haslam, N., Williams, B. J., Kyrios, M., McKay, D., & Taylor, S. (2005). Subtyping obsessive-compulsive disorder: A taxometric analysis. *Behavior Therapy*, 36, 381–391.
- Josephson, S. C., & Hollander, E. (1997). Body dysmorphic disorder by proxy. *Journal of Clinical Psychiatry*, 58, 86.
- Muris, P., Merckelbach, H., & Clavan, M. (1997). Abnormal and normal compulsions. *Behaviour Research and Therapy*, 35(3), 249–252.
- Muthén, L. K., & Muthén, B. O. (1998–2012). (BO)Mplus user's guide, 7.
- Rachman, S. (1997). A cognitive theory of obsessions. *Behaviour Research and Therapy*, 35, 793–802.
- Sorce, J., & Henriques, A. I. (1993). Computer-assisted telephone administration of a structured interview for obsessive-compulsive disorder. *American Journal of Psychiatry*, 150, 1737–1738.
- Szepsenwol, O., Shahar, B., & Doron, G. (2016). Letting it linger: Exploring the longitudinal effects of relationship-related obsessive-compulsive phenomena. *Journal of Obsessive-Compulsive and Related Disorders*, 11, 101–104.