

Psychometric Features of Relationship Obsessive-Compulsive Inventory: A scale in the Field of Relationship Obsessive-Compulsive Disorder

Soheila Ghomian¹ (MA), Mohammad-Reza Shaeiri¹ (PhD), Hojjatollah Farahani² (PhD)

1. Department of Clinical Psychology, Faculty of Humanities, University of Shahed, Tehran, Iran

2. Department of Psychology, Faculty of Humanities, Tarbiat Modares University, Tehran, Iran

Submitted: 24 December 2018

Accepted: 16 February 2019

Int J Behav Sci. 2019; 12(4): 154-161

Corresponding Author:

Mohammad-Reza Shaeiri,
Department of Clinical Psychology,
Faculty of Humanities,
University of Shahed,
Tehran,
Iran
E-mail: shairigm@gmail.com

Abstract

Introduction: The purpose of the present study was to evaluate the psychometric features of the Relationship Obsessive-Compulsive Inventory (ROCI) with a sample of the students of the universities in Tehran

Method: The present study included 459 married students who were selected through available sampling method from universities in Tehran. This research was conducted in two steps. Firstly, after completing the translation steps, the final questionnaire was prepared. In the second stage, the ROCI was implemented on students and its reliability was calculated; in addition, in order to examine convergent and divergent validities, ROCI was administered together with Depression, Anxiety and Stress Scales (DASS), Dyadic Adjustment Scale (DAS), Relationship Beliefs Inventory (RBI), Padua Inventory-Washington State University Revision (PI-WSUR) and Obsessive Compulsive Inventory-Revised (OCI-R) scales.

Results: The internal consistency of ROCI was in the range of 0.66 to 0.89, which is significant at the level of $p < 0.01$. Also, the correlation coefficient of test-retest reliability was in the range of 0.65 to 0.84 and the Cronbach's alpha for the whole questionnaire was 0.88 while the Cronbach's alpha for the subscales was estimated to be within 0.74- 0.79. The findings of convergent and divergent validities showed that the subscales and the total score of ROCI had a negative and significant correlation with DAS scale which ranged from -0.27 to -0.56 ($P < 0.01$), whereas it had a positive and significant correlation with DASS, DAS, RBI, PI-WSUR and OCI-R scales ranging from 0.26 to 0.61 ($P < 0.01$). In addition, considering the confirmatory factor analysis, indicators of good fitness were indications of the proper fitness of ROCI factors.

Conclusion: The ROCI demonstrated a good validity and reliability for being applied to Iranian couples.

Keywords: ROCI, Obsessive Compulsive Disorder Related to Spouse, Validity, Reliability

Introduction

Recently, many research has revealed that Obsessive and Compulsive Disorder (OCD) has a negative effect on relationship performance [1] and these effects, by themselves, result in intensified OCD symptoms. For example, the pressure individuals with OCD apply to their spouses resulting from their obsessions is one of the communication tension and conflict factors which affects the quality of relationship [2]. Accordingly, the partner's compliance with obsessive and compulsive symptoms (such as participation in obsessive compulsive rituals or avoidance of anxiety situations) is accompanied by intensified symptoms of OCD and reduced living satisfaction with individuals with OCD [3]. In addition, the severity of obsessive and compulsive symptoms is associated with reduced family, occupational and

social performances [4]. More recently, Doron et al. [5] argued that when the focus of the obsessive and compulsive symptoms is on intimate relationship, it has a devastating effect on the relationships between couples. In this regard, they have proposed a new theme for the OCD called Relationship Obsessive Compulsive Disorder (ROCD). This disorder often involves a person's mental engagement and doubt about the emotion he/she has towards his/her spouse, the doubt about the feeling his/her spouse has towards him/her, as well as the degree of "correctness" of this relationship (obsessions focused on relationship). Also, in this disorder, mental engagements may be related to the perceived defect of the spouse (obsessions focused on the spouse).

The symptoms of ROCD may be accompanied by distress, anxiety and disability. Recent studies that have been carried out on non-clinical population provided evidence to support this issue. In a study, obsessive compulsive symptoms focused on relationship measured using the Relationship Obsessive Compulsive Inventory (ROCI), showed a significant association with depression, even by controlling OCD, confusion in relationship, low self-esteem, anxiety and avoidance attachment [5].

Providing appropriate diagnostic tools for OCD can lead to in time treatment and sometimes, prevention of progress in affected people [6, 7]. So far, many tools have been designed to diagnose OCD. The Anxiety Disorders Interview Schedule for DSM-5 (ADIS), Anxiety Disorders Interview Schedule for DSM-5: Child and Parent Versions (ADIS-C/P), Structured Clinical Interview for DSM-5 (SCID), Mini International Neuropsychiatric Interview (MINI), Yale-Brown Obsessive-Compulsive Scale II (Y-B OCS), Obsessive Belief Questionnaire (OBQ), Madzely Obsessive-Compulsive Inventory (MOCI), Vancouver Obsessive Compulsive Inventory (VOCI), Obsessive-Compulsive Inventory-Revised (OCI-R) are considered as examples of these tools [8].

Moreover, Doron et al. [9] designed a tool for measuring ROCDs that assesses symptoms focused on relationship with the spouse in a range of mild to severe to debilitating mental engagements. Indeed, given that the ROCD is focused on obsessions related to intimate relationship, by interviewing couples using the DSM-5 framework, Doron et al. [9], concluded that some of the couples had doubts about the emotion they had towards their spouses, the feelings that their spouses had towards them, and the degree of "correctness" of the relationship with their spouses. In fact, their OCD symptoms, such as repetitive thoughts, images, or impulses with or without compulsive behaviors, were seen in the context of their intimate relationship. Hence, based on the above mentioned findings, they designed the ROCI.

The Relationship Obsessive-Compulsive Inventory (ROCI) is a 12-item self-reported scale that measures the severity of obsessive compulsive symptoms focused on relationship with the spouse in three dimensions of the individual's feelings to his/her spouse (e.g. "I constantly say to myself whether I really love my wife or not?"), the spouse's feelings toward the individual (such as "I constantly suspect whether my spouse likes me or not?")

and the degree of "correctness" of the relationship (such as "I check over and over again whether our relationship is correct or not?"). In a study by Doron et al. [9], the ROCI showed a suitable internal consistency. The correlation coefficients of ROCI were in the range of 0.66 to 0.92, which were significant at the level of $p < 0.001$. Also, the subscales of ROCI showed suitable correlation with OCI-R subscales that was significant in the range of 0.21 to 0.47 ($p < 0.001$). Furthermore, the correlation of its subscales with OBQ subscales, DASS (anxiety, depression and stress), the anxiety and avoidance subscales of Experiences in Close Relationships scale (ECR) and Relationship Assessment Scale (RAS) was in the ranges of 0.16 to 0.34, 0.34 to 0.56, 0.24 to 0.36 and -0.39 to -0.61, respectively, that were significant ($p < 0.001$). Also, the results of the confirmatory factor analysis indicated that the three factors of this tool have good fitness. In this regard, good fitness indicators such as CFI (0.96) and RMSEA (0.089) were obtained at an appropriate level. Also, the subscales and total scores of ROCI showed good internal consistency and had good test-retest reliability.

In Iran, no study has been done so far to investigate the psychometric properties of ROCI as one of the evaluation tools of ROCD. In this regard, utilizing an appropriate tool is important, especially for the ROCD, due to the difficulty of its evaluation, individual's unwillingness to express their symptoms, existence of sensitive treatment tools of ROCD [10], preventing the spread of relationship conflicts and, finally, preventing the worsening of its symptoms [9]. Thus, the purpose of this study was to examine the psychometric properties of ROCI, as one of the evaluation tools of ROCD.

Method

The present study had a correlational descriptive design. The statistical population consisted of all married students studying in Tehran universities in the academic year 2018-2019. Sample subjects were selected using available sampling method from Tehran, Shahid Beheshti, Shahed, Tarbiat Modares, Allame Tabatabai, Amir Kabir, Sharif and Kharazmi universities. The criteria for entering the present study were: being married, being students at the mentioned universities and having agreed to participate in the study. Given that in factor analysis studies, there should be at least 10 people for each item [11], thus, according to the 28 items of ROCI, at least 280 participants were required. To further refine the results of the factor analysis, more participants were used taking into account the deletion of some of the participants who did not complete the questionnaire, which finally, resulted in 459 participants.

The tools used in this research were as follows:

1- ROCI [9]: Information about ROCI is provided in the introduction.

2- Obsessive-Compulsive Inventory-Revised (OCI-R) [12]: This scale is a revised version of the Obsessive-Compulsive Inventory (OCI). This scale consists of 6 subscales and 18 items that are graded based on a 5-point-Likert scale (from 0 to 4). The subscales of OCI-R are: washing, obsession, hoarding, ordering, checking and undoing. The OCI-R has an appropriate internal consistency and test-retest

reliability [13-16]. Early evidence suggests the sensitivity of OCI-R to treatment, but it seems that more evidence is needed in this regard [17]. In addition, it seems that OCI-R is suitable for diagnostic screening and scores of 21 or higher can show OCD. In Iran, Mohammadi et al. [18] studied the reliability of the OCI-R. The results of their study showed the suitable internal consistency calculated through the Cronbach's alpha coefficient (ranging from 0.51 to 0.72). In addition, the six factor structure obtained in the original research, was confirmed by confirmatory factor analysis. Also, the results of their study showed that there were significant correlations between subscales of OCI-R ($p < 0.01$), but their amount was not too high (correlations were in the range of 0.26 to 0.80). In the current study, Cronbach's alpha of OCI-R was 0.90. Also, its internal correlation was calculated to be in the range of 0.45 to 0.79 ($P < 0.01$).

3- Depression, Anxiety and Stress Scale (DASS) [19]: This scale consists of 21 phrases related to symptoms of negative emotions (e.g. depression, anxiety and stress). Lovibond and Lovibond [19] reported that the internal consistency coefficients (Cronbach's alpha) of the three subscales of depression, anxiety and stress were 0.91, 0.81 and 0.89 respectively. Also, the results of their research showed that the three factor models could have better suited the data. In addition, the study of Brown et al. [20] showed that the internal consistency coefficients of the three subscales of depression, anxiety and stress were 0.96, 0.89, and 0.93, respectively. Also, the test-retest coefficients of three subscales of depression, anxiety and stress reported to be 0.71, 0.79 and 0.82, respectively. In that study, the three factor structure of DASS was confirmed using exploratory factor analysis. In Iran, in the study of Asghari Moghadam et al. [21], the three factor structure of DASS was also confirmed. Also, the reliability of the scales was confirmed by examining the internal consistency coefficients (Cronbach's alpha higher than 0.70 in all subscales) and test-retest coefficients (for depression scale: 0.84, for the anxiety scale: 0.89 and for the stress scale: 0.91). In addition, the construct validity of the two scales of depression and anxiety was confirmed through using the correlation coefficient between the scores of the two scales with the scores of the Beck Depression Inventory (BDI) and the Four Systems Anxiety Questionnaire (FSAQ). In this regard, the correlations were in the range of 0.42 to 0.90, which were significant at the level of $p < 0.001$. The concurrent validity of the depression, anxiety and stress scales was confirmed by comparing the scores of a subsample taken from the general population (315 people) with a peer group of patients with psychological disorders (130 people). In the current study, Cronbach's alpha of the subscales of DASS was in the range of 0.72 to 0.79. Also, its internal correlation was obtained to be in the range of 0.62 to 0.90 ($P < 0.01$).

4- Dyadic Adjustment Scale (DAS) [22]: This questionnaire is a 32-item tool for assessing the quality of the marital relationship in terms of the husband and wife or two people who live together. The DAS measures four dimensions: Dyadic consensus, dyadic satisfaction, dyadic cohesion and affectional expression. The total score is

between 0 and 151. The higher scores indicate a better relationship. The total score of DAS with Cronbach's alpha of 0.96, has a significant internal consistency. The internal consistency of the subscales is between good to excellent: dyadic satisfaction = 0.94, dyadic cohesion = 0.81, dyadic consensus = 0.90 and affectional expression = 0.73 [22]. Sharply and Cross [23] reported that the reliability of DAS was 0.96. In another study carried out by Spanier, and Thompson [24], the Cronbach's alpha coefficient was 0.91. In Iran, in the study of Molazadeh [25], the reliability coefficient was 0.86 and Cronbach's alpha was 0.89. Using concurrent implementation of DAS and Lock-Wallace Marital Adjustment Test (LWMAT), validity coefficient for 76 couples similar to the sample couples was obtained to be 0.90. ($p < 0/01$). In the current study, Cronbach's alpha of DAS was 0.85. Also, its internal correlation was estimated to be in the range of 0.54 to 0.92 ($P < 0.01$).

5- Relationship Beliefs Inventory (RBI) [26]: This scale was built to measure the relationship beliefs in marital life and has five subscales which measure five ineffective relationship beliefs. These beliefs include "disagreement is destructive", "the partner cannot change", "mind reading is expected", "and the sexes are different" and "sexual perfectionism". Eidelson and Epstein [26] reported Cronbach's alpha coefficient of five subsamples of RBI to be in the range of 0.72 to 0.81. The reliability of RBI through test-retest was obtained to be 0.81. The Persian version of RBI is provided by Mazaheri and Pur Etamad [27] and in their study, the Cronbach's alpha of RBI was estimated as 0.75. Dehshiri [28] reported that Cronbach's alpha of RBI was 0.88. In the current study, Cronbach's alpha of RBI was 0.75 and the Cronbach's alpha of its subscales was in the range of 0.50 to 0.71. Also, its internal correlation was in the range of 0.47 to 0.79 ($P < 0.01$).

6. Padua Inventory-Washington State University Revision (PI-WSUR) [8]: The Padua Inventory (PI) includes 39 questions that have been made to measure distress accompanied by obsessions and compulsions in an Italian sample and some questions of PI are closely correlated with 'concern'. In response to this limitation, the questionnaire was revisited by Burns et al. [29] and called Padua Inventory-Washington State University Revision questionnaire [6]. The Cronbach's alpha, two-half-test coefficients with Pearson correlation, and the reliability with test-retest method of PI-WSUR were obtained to be 0.92, 0.95 and 0.77, respectively. Also, for estimating criterion validity, the Persian version of PI-WSUR questionnaire was compared with the OCI-R and Maudsley Obsessional-Compulsive Inventory (MOCI) whose results were 0.69 and 0.58, respectively [30]. In the current study, Cronbach's alpha of PI-WSUR was 0.83 and the Cronbach's alpha of its subscales was in the range of 0.41 to 0.96. Also, its internal correlation was obtained in the range of 0.33 to 0.77 ($P < 0.01$).

This research was conducted in two steps. In the first stage, the test was translated by three psychologists (who held PhD in psychology). Then, the translations were compared together and some adaptation was implemented. After the necessary amendments, the final version was prepared. Then, the final version was

translated by an English specialist (who had master's degree in English translation). Then, the translated version was compared with the original questionnaire and the problems of the final questionnaire were modified. In the second stage, the prepared questionnaire (ROCI) was administered to a few married students to check the comprehensibility of the phrases and then, along with DAS, DASS, OCI-R, PI-WSUR, and RBI, it was implemented on a large sample. Then, the data was entered into the SPSS for further analysis.

In order to analyze the data, descriptive statistics such as mean and standard deviation were used. In this research, Pearson correlation and Cronbach's alpha coefficients were used to calculate the coefficients of reliability. To verify the construct validity, the confirmatory factor analysis was used. The convergent and divergent validity were used based on correlation of ROCI with DAS, DASS, OCI-R, PI-WSUR, and RBI. The mentioned analyses were performed using SPSS 21 and Lisrel 8.80.

Results

The results of descriptive analysis of the demographic characteristics of the sample population were as follow: 136 (29.6%) males and 323 (70.4%) females, most of which had no child (67.5%). Studying in the humanities (51.4%) and then in technical engineering (21.8%), was the most frequent among students. Many of them were studying at Masters (42.9%) and Ph.D. (23.3%) levels. Also, many of them were not employed (60.1%) and did not have a history of referring to a psychologist (71.9%). The age of the students was between 18 and 50 years old with an average of 23.58 (SD = 7.9) and their marriage duration was between 6 months and 39 years (M=4.93 years; SD = 5.96). The frequency and percentage of the age range of 18-28, 29-39 and 40-50 years were 262 (58.4%), 149 (25.3%) and 48 (16.3%), respectively.

The descriptive results of ROCI are presented in Table 1. The presented results in Table 2 show that all correlations between "love for the partner", "relationship rightness", "being loved by the partner" and the total score of ROCI

are positive and significant ($p < 0.01$).

The presented results in Table 3 show that all test-retest correlations of the subscales and total score of ROCI are positive and significant ($p < 0.01$). Also, the Cronbach's alpha coefficients of the "love for the partner", "relationship rightness" and "being loved by the partner", were 0.79, 0.75 and 0.74, respectively while the Cronbach's alpha of the total scale was 0.88. Thus, according to the obtained alpha and the presented results in Tables 2 and 3, we can claim that ROCI has a suitable reliability with the sample of Iranian couples.

Findings of the convergent and divergent validity (Table 4) show that the subscales and the total score of ROCI have a negative and significant correlation with all subscales and the total score of DAS ($p < 0.01$) and this is an indicator of the suitable divergent validity of ROCI. In addition, the subscales and the total score of ROCI have a positive and significant correlation with all subscales and the total score of DASS ($p < 0.01$) and have a positive and significant correlation with many subscales and total score of RBI, OCI-R and PI-WSUR ($p < 0.01$ and $p < 0.05$) that indicate the appropriateness of the convergent validity of ROCI.

In figure 1, the diagram of the confirmatory factor analysis of ROCI is presented. Also, Table 5 shows the results of the factor loads that is extracted from the confirmatory factor analysis of ROCI. As it is clear in this table, the Composite Reliability (CR) and the Averaged Variance Extracted (AVE) are approximately in the normal range [31]. In addition, the fitness indicators of the confirmatory factor analysis of ROCI are presented in Table 6. As it can be seen in this Table, in general, the fitness indicators show the goodness of fit of the factors of ROCI. Of course, the amount of the square index of χ^2 on the DF is not obtained in the normal range, which is predictable, due to the high sample size [32]. Thus, it can be stated that ROCI has an acceptable structural validity. Therefore, based on what is shown in Tables 4, 5 and 6, it can be assumed that ROCI has an appropriate validity with the sample of Iranian couples.

Table 1. The descriptive results of ROCI

	Mean	SD
Love for the Partner	2.55	3.09
Relationship Rightness	4.35	3.39
Being Loved by the Partner	2.97	3.02
ROCI (total)	9.88	8.40

Table 2. Intercorrelation between the subscales and total scores of ROCI

	Love for the Partner	Relationship Rightness	Being Loved by the Partner	ROCI
Love for the Partner	1	.70**	.66**	.89**
Relationship Rightness	.70**	1	.63**	.89**
Being Loved by the Partner	.66**	.63**	1	.86**
ROCI (total)	.89**	.89**	.86**	1

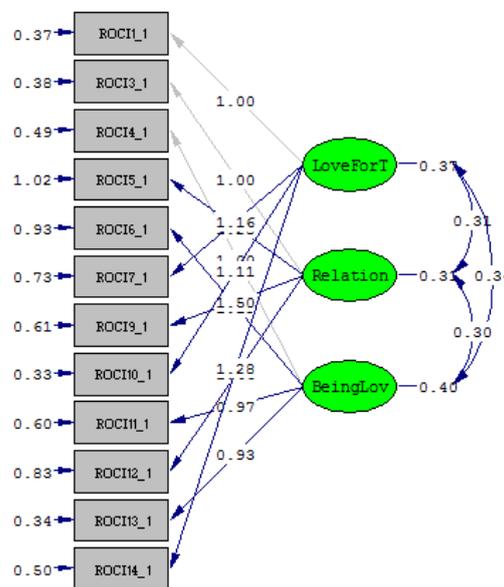
** Correlation is significant at the 0.01 level (2-tailed).

Table 3. Test-retest correlation of ROCI

	Test-retest correlation
Love for the Partner	.79**
Relationship Rightness	.84**
Being Loved by the Partner	.80**
ROCI (total)	.65**

Table 4. The results of correlation of ROCI with DAS, DASS, OCI-R, PI-WSUR, and RBI

		Love for The Partner	Relationship Rightness	Being Loved By The Partner	ROCI (total)
DAS	Satisfaction	-.47**	-.47**	-.27*	-.45**
	Cohesion	-.44**	-.47**	-.24*	-.44**
	Consensus	-.47**	-.48**	-.46**	-.53**
	Affectional Expression	-.41**	-.39**	-.25*	-.40**
	Total	-.54**	-.55**	-.41**	-.56**
DASS	Depression	.52**	.40**	.44**	.50**
	Anxiety	.40**	.45**	.49**	.49**
	Stress	.45**	.43**	.53**	.52**
	Total	.51**	.48**	.55**	.57**
OCI-R	OCI-R	.30**	.20	.31**	.30**
PI-WSUR	PADOVA	.29*	.29*	.26*	.33**
	Disagreement is Destructive	.49**	.41**	.43**	.53**
RBI	Mindreading is Expected	.42**	.13	.38**	.36**
	Partners Cannot Change	.45**	.36**	.30**	.44**
	Sexual Perfectionism	.19	.29**	-.07	.17
	Sexes are Different	.27*	.24*	.03	.22
	Total	.61**	.48**	.37**	.58**



Chi-Square=592.94, df=51, P-value=0.00000, RMSEA=0.152

Figure 1. The diagram of confirmatory factor analysis of ROCI

Table 5. The results of standard and non-standard factor loads of ROCI

Factors	Item	β	B	T	CR	AVE
Factor1 "Love For The Partner"	1 The thought that I don't really love my partner haunts me.	.70	.37	13.02	.80	.50
	7 I feel that I must remind myself over and over again why I love my partner.	.64	.73	13.70		
	10 I continuously doubt my love for my partner.	.76	.33	12.07		
	14 I feel a need to repeatedly check how much I love my partner.	.74	.50	12.52		
Factor 2 "Relationship Rightness"	3 I constantly doubt my relationship.	.67	.38	12.93	.75	.44
	5 I check and recheck whether my relationship feels "right".	.58	1.02	13.82		
	9 I am extremely disturbed by thoughts that something is "not right" in my relationships.	.73	.61	11.96		
Factor 3 "Being Loved By The Partner"	4 I find it difficult to dismiss doubts regarding my partner's love for me.	.67	.49	12.69	.75	.43
	6 I am constantly looking for evidence that my partner really loves me.	.62	.93	13.33		
	11 I keep asking my partner whether she/he really loves me.	.62	.60	13.28		
	13 I am constantly bothered by the thought that my partner doesn't really want to be with me.	.71	.34	12.07		

Table 6. The results of the indicators of good fitness of ROCI

Indicators of good fitness	data
X2/df	11.62
NFI	.91
GFI	.82
AGFI	.73
CFI	.92
IFI	.92
RFI	.88
RMSEA	.15

Discussion

The present study was conducted to determine the validity and reliability of ROCI with a sample of married students in Tehran universities. In general, the results of the correlation coefficients of ROCI are consistent with previous research results [9]. In addition, in general, the results of the reliability by Cronbach's alpha, internal consistency and test-retest methods of ROCI are in line with those of Doron et al. [9].

Also, as the results of the current study showed, ROCI indicated a negative and significant correlation with DAS, and showed a positive and significant correlation with DASS, OCI-R, PI-WSUR and RBI.

The negative and significant correlation between ROCI and DAS indicates that the marital adjustment of individuals, who are doubtful about their love for the partner, their partner's love towards them, as well as their relationship's "rightness" is low. This result is in line with the results of Doron et al. [9], which showed a negative relationship between ROCI and marital adjustment. In fact, relationship obsessive compulsive symptoms have a significant impact on marital satisfaction. The frequent doubts about the spouse or the relationship with him/her, imposes serious damages to the core of marital relationships and it directly affects the durability of the relationship [33, 34].

People with ROCD take their disturbing thoughts as evidence that something is wrong in their relationship. In this situation, these thoughts may increase the likelihood of doubt about the "correctness" of the relationship and about the emotion they have about their spouse [35]. Also, ROCD with impact on the relationship structures, will follow a combination of personal and relational distress. For example, many mental engagements about the love for the partner may increase the likelihood of the person's dependence on him and the creation of hierarchical connections. In some people, these hierarchical connections may increase the fear of abandonment and lead to negative self-assessments, feelings of guilt and embarrassment. In some other people, this situation may reinforce feelings of anger and frustration as well as not being able to be sociable [9].

Also, the results of the current study showed that there is a positive and significant relationship between ROCI, OCDI-R and PI-WSUR. In this regard, the results of this study are consistent with the results of Doron et al.'s study [9], which found a positive and significant relationship between ROCD and OCD. In fact, ROCD is considered as a kind of OCD that is exaggerated, is not based on reality or has limited connection to reality and is in conflict with the

individual's real feelings about the spouse. Thus, a person with relationship obsessive compulsive symptoms has a limited compatibility, and most likely, following these obsessions, relies on neutral behaviors. The tension and distress caused by relationship obsessions may decrease with assurance from the spouse or others (like "do you think my spouse loves me?"), checking behaviors (such as "do I feel like my wife?"), or avoiding from irritable situations of doubts (such as situations where parents or friends are). This process is very similar to what is seen in the OCD literature. In other words, as the literature indicates, the anxiety-reducing compulsive behaviors that occur following obsessions, over time, lead to the continuation and exacerbation of the cycle of these obsessions [5].

In addition, the results of the current study showed that there is a positive and significant correlation between ROCI and DASS. Thus, it can be stated that people with ROCD, probably show a high degree of anxiety and depression. This finding is consistent with the research results of Doron et al. [9]. In this regard, Doron et al. [35], in another research, showed that people with ROCD feel guilt and embarrassment, due to their doubts and mental engagements. They may be constantly criticizing themselves for such emotions which may eventually influence their psychological well-being. In fact, people with ROCD, experience abundant distress because of their symptoms, the disability of these symptoms, and the belief that they have caused relationship problems. Also, the results of various studies indicate that at least one-third of the patients with OCD are simultaneously afflicted with depression in their first treatment [36, 37]. Additionally, they experience a decline in quality of life [38-40], a significant decline in social performance [40], and an increase in comorbidity with other mental disorders [41]. Consequently, it can be concluded that there is high levels of comorbidity with other psychiatric disorders among people with OCD, including ROCD.

Furthermore, a positive and significant correlation between ROCI and RBI is another result of the current research. In this regard, the research of Szepeswol et al. [42] is in line with the current research. They have both shown that individuals with ROCD obtained high scores in maladaptive relational beliefs. As a result, it can be claimed that maladaptive relational beliefs play a significant role in the formation and continuation of ROCD. In this regard, it can be said that repeated doubt towards the spouse or the relationship with him/her, seriously damages the core of marital relationship and directly affects the durability of the communication. On the contrary, the positive perception about the spouse and the relationship with her/him is a positive and effective belief that plays an important role in the sustainability of an intimate and successful relationship [33, 34]. The positive perception about the spouse and the relationship with him/her is associated with positive outcomes such as high marital satisfaction, less conflicts, and more durable relationship [43-45]. This is while lack of such perception may affect the durability of relationship. Individuals with ROCD have problems in

maintaining and sustaining a positive perception towards the spouse or the relationship with him/her, or even may have lack of such positive perception, thereby their marital satisfaction is low [46].

In addition, the results of the current study showed goodness of fit of the three factors of ROCI that was also in line with the results of Doron et al. [9].

This study, like many other studies suffers from some limitations. The use of some universities in Tehran, instead of all universities in Tehran, whether public or private, is one of the limitations of this research. Also, lack of diversity in the sample population (using only student samples) and the use of the available sampling method, are the other constraints of this research. In this respect, using the random or cluster sampling method provides a more precise selection of sample individuals and finally, leads to a better generalization of sample results to community members. In addition, inability to use the clinical sample with ROCD and the comparison of these patients with healthy subjects are the other limitations of the current study. Thus, given the mentioned constraints, these suggestions can be presented for future research: the use of all universities in Tehran, including national and private universities; the diversification of sample population and the use of the clinical population with ROCD followed by comparing the results of these patients with healthy people.

Conclusion

Based on the results of the current research, it can be stated that ROCI has an appropriate validity and reliability in Iranian couples. Thus, considering that the ROCI evaluates the obsessive-compulsive disorder, it is possible to utilize this tool to evaluate and screen patients with ROCD in the clinical and research space.

Acknowledgment

The authors would like to thank all the students and authorities of the universities of Tehran, Shahid Beheshti, Shahed, Tarbiat Modares, Kharazmi, Allame Tabatabaei, Sharif and Amir Kabir, who collaborated to conduct this research.

References

1. Angst J, Gamma A, Endrass J, Goodwin R, Ajdacic V, Eich D, et al. Obsessive-compulsive severity spectrum in the community: Prevalence, comorbidity, and course. *European Archives of Psychiatry and Clinical Neuroscience*. 2004;254(3):156-64.
2. LM K. Quality of life in obsessive-compulsive disorder. *Psychiatric Clinics of North America*. 2000;23:509-17.
3. Boeding SE, Paprocki CM, DH. B, AJ, Wheaton MG, Fabricant LE, et al. Let me check that for you: Symptom accommodation in romantic partners of adults with Obsessive Compulsive Disorder. *Behaviour Research and Therapy*. 2013;51(5):316-22.
4. Ruscio AM, Stein DJ, Chiu WT, RC K. The epidemiology of obsessive-compulsive disorder in the National Comorbidity Survey Replication. *Molecular Psychiatry*. 2008;15(1):53-63.
5. Doron G, Talmor D, Szepešwol O, DS D. Relationship-centered obsessive compulsive Phenomena. *Psicoterapia Cognitiva e Comportamentale*. 2012;18(1):79-91.
6. Gönner S, Ecker W, R L. Multidimensional Assessment of OCD: Integration and Revision of the Vancouver Obsessional-Compulsive Inventory and the Symmetry Ordering and Arranging Questionnaire. *Journal of Clinical Psychology*. 2010;66(7):739-57.
7. Overduin MK, A F. . Assessing obsessive-compulsive disorder (OCD): A review of self-report measures. *Journal of Obsessive-Compulsive and Related Disorders*. 2012;1(4):312-24.
8. E S. Obsessions and compulsions: The Padua Inventory. *Behaviour Research and Therapy*. 1988;26(2):169-77.
9. Doron G, Derby D, Szepešwol O, D T. Tainted Love: Exploring relationship-centered obsessive compulsive symptoms in two non-clinical cohorts. *Journal of Obsessive-Compulsive and Related Disorders*. 2012;1(1):16-24.
10. Rapp AM, Bergman RL, Piacentini J, JF M. Evidence-Based Assessment of Obsessive-Compulsive Disorder. *Journal of Central Nervous System Disease*. 2016;8:13-29.
11. Barrett PT, P K. The Observation to Variable Ratio in Factor Analysis. *Personality Study & Group Behaviour*. 1981;1(1):23-33.
12. Foa EB, Kozak MJ, Salkovskis PM, Coles ME, N A. The validation of a New Obsessive-Compulsive Disorder Scale: the obsessive-compulsive inventory. *Psychology Assessment*. 1998;10(3):206-14.
13. Huppert JD, Walther MR, Hajcak G, Yadin E, Foa EB, Simpson HB, et al. The OCI-R: validation of the sub-scales in a clinical sample. *Journal of Anxiety Disorder*. 2007;21(3):394-406.
14. Abramowitz JS, Deacon BJ, Olatunji BO, Wheaton MG, Berman NC, Losardo D, et al. Assessment of obsessive-compulsive symptom dimensions: development and evaluation of the Dimensional Obsessive-Compulsive Scale. *Psychology Assessment*. 2010;22(1):180-98.
15. Abramowitz JS, BJ D. Psychometric properties and construct validity of the obsessive-compulsive inventory - revised: replication and extension with a clinical sample. *Journal of Anxiety Disorder*. 2006;20(8):1016-35.
16. Hajcak G, Huppert JD, Simons RF, EB F. Psychometric properties of the OCI-R in a college sample. *Behavior Research Therapy*. 2004;42(1):115-23.
17. Abramowitz JS, Tolin DF, GJ D. Measuring change in OCD: sensitivity of the obsessive-compulsive inventory-revised. *Journal of Psychopathology and Behavioral Assessment*. 2005;27(4):317-24.
18. Mohammadi A, Zamani R, L F. Validity and reliability of Revised version of the Obsessive-Compulsive Inventory (OCI-R) in the student population. *Psychological Research*. 2008;11(1&2):66-77.
19. Lovibond PF, SH L. The structure of negative emotional states: comparison of the depression anxiety stress scales (DASS) with the beck depression and anxiety inventories. *Behaviour Research and Therapy*. 1995;33(3):335-43.
20. Brown TA, Chorpita BF, DH B. Structural relationships among dimensions of the DSM-IV anxiety and mood disorders and dimensions of negative affect, positive affect, and autonomic arousal. *Journal of Abnormal Psychology*. 1998;107(2):179-92.
21. Asghari Mghdam MA, Saed F, Dibajnia P, J Z. Preliminary Evaluation of Reliability and Reliability of Depression, Anxiety and Stress Scales (DASS) in non-clinical samples. *Daneshvar of Behavior*. 2008;15(21):23-38.
22. GB S. Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family*. 1976;38(1):15-28.
23. Sharply CF, DG C. A psychometric evaluation of the spanier dyadic adjustment scale. *Journal of marriage and the family*. 1982;44(3):739-41.
24. Spanier GB, L T. A confirmatory factor analysis of the Dyadic Adjustment Scale. *Journal of Marriage and Family*. 1982;44(3):731-8.
25. J. M. Relationship between marital adjustment and personality factors and coping styles in control children: Tarbiat Modarres University; 2002.
26. Eidelson RJ, NB. E. Cognition and relationship maladjustment: Development of a measure of dysfunctional relationship beliefs. *Journal of Consulting and Clinical Psychology*. 1982;50(5):715-20.
27. Mazaheri MA, HR PE. The scale of relational beliefs Tehran: Family Research Institute of Shahid Beheshti University; 2001.
28. GH. D. Comparing the beliefs of women referring to judicial centers and women wishing to continue living in Tehran. *Research family*. 2005;1(2):13-24.
29. Burns GL, Keortge SG, Formea GM, LG S. Revision of the Padua Inventory of obsessive compulsive disorder symptoms: Distinctions between worry, obsessions, and compulsions.

- Behaviour Research and Therapy. 1996;34(2):163-73.
30. Shams G, Kaviani H, Ismaili Tarkanbury Y, Ebrahim Khani N, A A. Validity and reliability of the Persian version of the Padua Inventory (correction of the Washington State University) in the healthy Iranian student News of Cognitive Science. 2011;12(1):1-16.
 31. Fornell C, DF L. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*. 1981;18(1):39-50.
 32. Tabachnick BG, LS F. Using multivariate statistics. Boston: Pearson Education; 2007.
 33. Fletcher GJO, Simpson JA, G T. Ideals, perceptions, and evaluations in early relationship development. *Journal of Personality and Social Psychology*. 2007;79(6):933-40.
 34. Overall NC, Fletcher GJO, JA S. Regulation processes in intimate relationships: The role of ideal standards. *Journal of Personality and Social Psychology*. 2006;91(4):662-85.
 35. Doron G, Derby DS, O S. Relationship obsessive compulsive disorder (ROCD): A conceptual framework. *Journal of Obsessive-Compulsive and Related Disorders*. 2014;3:169-80.
 36. Real E, Montejó Á, Alonso P, J MM. Sexuality and obsessive-compulsive disorder: The hidden affair. *Neuropsychiatry*. 2013;3(1):23-31.
 37. Ghassemzadeh H, Raisi F, Firoozikhojastefar R, Meysamie A, Karamghadiri N, Nasehi AA FJ, Sorayani M, Ebrahimkhani N. A Study on Sexual Function in Obsessive-Compulsive Disorder (OCD) Patients With and Without Depressive Symptoms. *Perspectives in Psychiatric Care*. 2017;53:208-13.
 38. Jacoby RJ, Leonard RC, Riemann BC, JS A. Predictors of quality of life and functional impairment in Obsessive-Compulsive Disorder. *Comprehensive Psychiatry*. *Comprehensive Psychiatry*. 2014;55(5):1195-202.
 39. Subramaniam M, Soh P, Vaingankar JA, Picco L, SA C. Quality of life in obsessive-compulsive disorder: impact of the disorder and of treatment. *CNS Drugs*. 2013;27(5):367-83.
 40. Eisen J, Mancebo M, Pinto A, Coles M, Pagano M, Stout R, et al. Impact of obsessive-compulsive disorder on quality of life. *Comprehensive Psychiatry*. 2006;47(4):270-5.
 41. Torres AR, Prince MJ, Bebbington PE, Bhugra D, Brugha TS, Farrell M, et al. Obsessive-compulsive disorder: prevalence, comorbidity, impact, and help-seeking in the British national psychiatric morbidity survey of 2000. *The American Journal of Psychiatry*. 2006;163(11):1978-85.
 42. Szepsenwol O, Doron G, B S. Letting it linger: Exploring the longitudinal effects of relationship-related obsessive-compulsive phenomena. *Journal of Obsessive-Compulsive and Related Disorders*. 2016;11:101-4.
 43. Barelds DPH, Dijkstra P. Positive illusions about a partner's personality and relationship quality. *Journal of Research in Personality*. 2011;45(1):37-43.
 44. Murray SL, Griffin DW, Derrick JL, Harris B, Aloni M, S L. Tempting fate or inviting happiness? Unrealistic idealization prevents the decline of marital satisfaction. *Psychological Science*. 2011;22(5):619-26.
 45. Rusbult CE, VanLange PAM, Wildschut T, Yovetich NA, J V. Perceived superiority in close relationships: Why it exists and persists. *Journal of Personality and Social Psychology*. 2000;79(4):521-45.
 46. Caughlin JP, TL H. The affective structure of marriage In: A.L. Vangelisti DP, editor. *The Cambridge handbook of personal relationships* New York: Cambridge University Press; 2000. p. 131-56.