



Journal of Fundamentals  
of Mental Health



Mashhad University  
of Medical Sciences



Psychiatry and Behavioral Sciences  
Research Center

### Original Article

## Obsession improvement in female patients with relationship obsessive compulsive disorder: A single subject study

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### Abstract

**Introduction:** The present study aimed to evaluate the efficacy of the combined protocol of Acceptance and Commitment Therapy (ACT) for Obsessive-Compulsive Disorder (OCD) and ACT affecting couples' interpersonal context on improving relationship obsession of female patients with Relationship Obsessive-Compulsive Disorder (ROCD).

**Materials and Methods:** The present study was conducted as a single-subject study with a multiple baseline design to evaluate the efficacy of the combined protocol of ACT for OCD and couples on improving ROCD in Iranian couples. The sample was married students studying at Tehran universities in 2019 with a ROCD diagnosis. In the combined treatment of ACT for OCD and couples, two patients; in the ACT for OCD, two patients, and the ACT for couples, two patients were studied that were randomly replaced in these treatments. Research instruments included New Partner-Related Obsessive-Compulsive Symptoms Inventory (New PROCSI), and New Relationship Obsessive-Compulsive Inventory (New ROCI).

**Results:** The scores of participants' median, average, relative, and absolute levels decreased from baseline to treatment stage in both new PROCSI and new ROCI. Also, except for participants 5 and 6, the rest of the participants from baseline to treatment showed stable changes in both questionnaires. The Mean Baseline Reduction (MBLR) and Reliable Change Index (RCI) of those who received the combined ACT were better than those who received other forms of ACT.

**Conclusion:** The combined treatment of ACT for OCD and couples is the most effective method to reduce the score of new PROCSI and new ROCI compared to the other two treatments.

**Keywords:** Acceptance and Commitment Therapy, Couples, Relationship Obsessive-Compulsive Disorder

### Please cite this paper as:

Ghomian S, Shaeiri MR, Farahani H. Obsession improvement in female patients with relationship obsessive compulsive disorder: A single subject study. *Journal of Fundamentals of Mental Health* 2022 Jul-Aug; 24(4): 241-251.

### Introduction

Doron et al. (1) have proposed a new theme of OCD called Relationship Obsessive-Compulsive Disorder (ROCD). ROCD symptoms range from

obsessions focused on spouse characteristics (such as doubt about intelligence and social competence of spouse) and relationship to spouse (such as doubt about loving a spouse), as well as a range of

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Received: May. 03, 2021

Accepted: May. 07, 2022

compulsive behaviors such as frequent checking (like repeatedly checking how one feels about their spouse), comparisons (such as comparing the characteristics of the spouse with others), neutralization (such as visualizing happy moments with the spouse) and reassurance. Obsessions and compulsive behaviors related to ROCD lead to distress and often affect one's social and occupational function and other areas of life. For example, mental occupations about communication are often ego-dystonic, meaning that they conflict with one's perception of the relationship with her/his spouse or that they may conflict with one's intrinsic values. These mental conflicts are perceived as unacceptable and unwanted, and often the individual feels guilty and embarrassed because of their occurrence and/or content (1).

Relationship-focused Obsessive-Compulsive (OC) symptoms, like other symptoms of OCD, only follow the treatment accompanied by significant disabling distress. ROCD is usually diagnosed late because people with this disorder believe that such experiences, even if distressing, are a natural part of the relationship that is forming and reflect the natural problems of life. In addition, people with ROCD usually seek treatment when they experience relationship instability.

Therefore, it can be said that a person who suffers from symptoms of ROCD needs specific interventions (1). There is plausible evidence of the efficacy of Cognitive-Behavioral Therapy (CBT) for OCD (2-6), but not everyone responds appropriately to this treatment, and many of these patients either discontinue this treatment or develop symptoms when the treatment is completed (3,7).

The results of various studies indicate that to remain patients with OCD in treatment, it is necessary to provide a basis for accepting their beliefs instead of challenging them. Therefore, it is best to avoid confronting or challenging their thoughts and focus on the interplay of their symptoms with their performance. This issue has been addressed in acceptance-based therapies (8,9). Therefore, improving patients' acceptability in treating OCD seems to be a priority (10).

Acceptance and Commitment Therapy (ACT), one of the acceptance-based therapies, is based on the assumption that it is challenging to remove cognitions that the individual has learned over time

(11,12). The goal of ACT for OCD is to help the patient move toward a meaningful and valuable life, even with unwanted thoughts, anxiety, and a desire to perform compulsive behaviors. This goal can be achieved through acceptance, cognitive defusion, awareness of the present moment, self as context, values (moving towards values), and committed action (13).

ACT is one of the treatments for OCD that is growing evidence supporting it (14-23). In this regard, using a multiple baseline design, Twohig et al. (15) showed that patients with OCD significantly decreased obsessive-compulsive symptoms after ACT and three months follow-ups. Also, as predicted, patients showed a significant improvement in symptoms of anxiety and depression, which was seen following the reduction of experimental avoidance and believability of thoughts and the need to respond to obsessions. Also, Twohig et al. (24), in one of the most extensive randomized controlled trials of ACT for OCD, treated 79 patients with OCD who underwent 8-session ACT and Progressive Relaxation Training (PRT) without the use of traditional exposure training.

The results of their study, with the help of the Yale-Brown Obsessive Compulsive Scale (Y-BOCS), showed that ACT had a more significant change in the severity of OCD in patients at post-test and follow-up period compared to PRT. However, the rate of patients' acceptance (25) of ACT was significantly higher than that of patients receiving PRT (on a 5-point scale, ACT: 4.4 and PRT: 3.7). In Iran, few studies have been performed on the effect of ACT on OCD. Nevertheless, all these studies indicate the efficacy of ACT for OCD (26-28).

On the other hand, the striking point in recent research is that OCD has been addressed in the communication context, and there seems to be a bilateral interaction between OCD and the communication context: OCD symptoms affect intimate communication, and aspects of communication also plays a role in the persistence of OCD (29). Thus, there is a faulty cycle of OCD symptoms and maladaptive communication in couples (30).

Various studies have examined the role of couples' communications in the persistence of OCD and have shown limited attention to altering and modifying these interpersonal dynamics,

which are associated with prevention of treatment and increased risk of recurrent OCD (30). In this regard, few studies have been conducted with the help of CBT. For example, a study by Boeding et al. (31) examined the spouse's adaptive behaviors of patients with OCD and showed that prior to CBT, spouse compliance was positively correlated with the patient's OCD symptoms and was negatively correlated with marital satisfaction. Also, after 16 sessions of CBT for the patient, there was a significant relationship between the spouse's compliance with poor treatment outcomes.

Thus, Boeding et al. (31) emphasized the necessity of accompanying patients' spouses in the treatment process. In Iran, in the study by Soroush et al. (32), the effectiveness of emotion-oriented and behavioral-integrated couple therapy on obsessive-compulsive syndrome and marital boredom of couples with the obsessive-compulsive disorder has been proven.

According to reviews, it was found that in only one study, the combination of intervention for OCD and couple-based intervention was considered. A study by Abramowitz et al. (30) introduced an ERP upgrading and couple-based therapy program for couples whose one of them is suffering from OCD.

It was a couple-based treatment program that increased the efficacy of ERP on OCD symptoms. The results of this study, with the help of a case study, indicated the efficacy of the designed program in improving OCD symptoms and communication context.

In Iran, several studies have shown the efficacy of ACT in the communication context of couples (30,33-36). However, according to reviews, so far, no study has been conducted to evaluate the efficacy of ACT in improving ROCD as well as in enhancing the quality of communication context of couples with OCD, including ROCD.

Thus, according to foreign and Iranian studies, the vacuum of the study of the efficacy of ACT on ROCD and, the importance of the interpersonal context of couples with OCD and the vacuum of the study of the efficacy of ACT on enhancing the quality of interpersonal communication in couples with ROCD, the purpose of the present study was to evaluate the efficacy of the combined protocol of ACT for ROCD and ACT affecting couples' interpersonal context on improving relationship obsession of female patients with ROCD.

## Materials and Methods

The present study was conducted as a single-subject study with a multiple baseline design to evaluate the efficacy of the combined protocol of ACT for OCD and couples on improving ROCD in Iranian couples (IRCT code of the current article is IRCT20131128015577N4). The statistical population of the current study included all married students studying in Tehran in 2019 who had a ROCD diagnosis.

After conducting a clinical interview in the previous study (37) and selecting participants who achieved high scores (above one standard deviation) on the ROCI and PROCSI, in order to measure OCD more accurately, SCID-5-RV and the new version of the ROCI and PROCSI (38,39) were performed on them and finally, with the fall of the two patients that existed from the beginning of the study, six patients were satisfied to participate in this study. Coincidentally, two of them were selected for ACT for OCD, two with their spouses were selected for ACT for the couple, and two with their spouses were selected for combined treatment of ACT for OCD and couples. All participants were randomly assigned to each treatment. For each participant, three baseline sessions were scheduled in the weeks before treatment. In addition, three evaluation sessions were considered during and immediately after treatment and two evaluation sessions in the follow-up period, each conducted within two weeks. Participants 1 and 2 were treated with combined treatment of ACT for OCD and couples, participants 3 and 4 were treated with ACT for OCD, and participants 5 and 6 were treated with ACT for couples. All participants were women; their age range was 28 to 37 years. The main symptoms of their ROCD were mainly doubts about infidelity.

Inclusion criteria in the current study were: being married, diagnosis of OCD, diagnosis of ROCD (score above a standard deviation of the new scales of ROCI and PROCSI), lapse at least six months of marriage, consent to participate in the study and signed written consent. In addition, exclusion criteria in the current study were: they have been in treatment or hospitalized for the past six months, history of substance abuse (due to interference with treatment sessions), suffering other mental disorders except other obsessive-compulsive spectrum disorders (according to the Structured

Clinical Interview based on DSM-5-Research Version (SCID-5-RV)), and absence of treatment in three consecutive sessions.

According to the single-subject study with a multiple baseline design, in terms of data analysis from visual analysis of graphs and trending and stability index, Percentage of Non-overlapping Data (PND), Percentage of Overlapping Data (POD), and Reliable Change Index (RCI).

#### Research instruments

A) *New Partner-Related Obsessive-Compulsive Symptoms Inventory (New PROCSI) (by Iranian culture)*: This scale, which is based on Iranian culture, consists of 22 items. This scale consists of one factor. After analyzing its content, the factor consisted of a combination of compulsions and obsessive thoughts related to spouse characteristics (such as intelligence, competence, sociability, morality, emotional stability, and physical appearance). In confirmatory factor analysis, this scale showed significant superiority in the Chi-square index compared to the original PROCSI. Also, in the previous study (38), the new PROCSI showed better convergent validity with the Depression, Anxiety and Stress Scale (DASS), Relationship Beliefs Inventory (RBI), Obsessive-Compulsive Inventory-Revised (OCI-R), and especially Obsessive Beliefs Questionnaire (OBQ) than the original PROCSI and also better divergent validity with Dyadic Adjustment Scale (DAS) than the original PROCSI. The correlation coefficient of the test-retest of this scale within two weeks obtained 0.86, which was significant at  $P < 0.01$ . Also, Cronbach's alpha was 0.91.

B) *New Relationship Obsessive-Compulsive Inventory (New ROCI) (by Iranian culture)*: This scale, which is based on Iranian culture, consists of 19 items and consists of two factors. After examining the content of the factors, factor 1 refers to obsessive thoughts about loving a spouse, being loved by a spouse, and "correctness" of the relationship, and factor 2 refers to compulsive behaviors about loving a spouse, being loved by a spouse and "correctness" of the relationship. In confirmatory factor analysis, the new ROCI showed significant superiority over all fitness indicators over the original ROCI. Also, in the previous study (39), this scale showed better convergent validity with the Depression, Anxiety and Stress Scale (DASS), Relationship Beliefs

Inventory (RBI), Obsessive-Compulsive Inventory-Revised (OCI-R), and especially Obsessive Beliefs Questionnaire (OBQ) than the original ROCI and also better divergent validity with Dyadic Adjustment Scale (DAS) than the original ROCI. The correlation coefficients of test-retest of this scale within two weeks for factors 1, 2, and total score were 0.85, 0.78, and 0.79, respectively. Those all were significant at  $P < 0.01$ . Also, the Cronbach's alpha for factors 1 and 2 and the total score were 0.60, 0.74, and 0.83, respectively.

C) *Combined protocol of ACT for OCD and couples*: In combined sessions of ACT for OCD and couples, the content of sessions of couple therapy of ACT and OCD therapy of ACT go hand in hand. Given that the overall course of ACT sessions in all therapeutic protocols is as follows: initial evaluation and understanding of ACT logic, understanding of constructive hopelessness, acceptance and mindfulness exercises, cognitive defusion and self as context exercises, and finally, the exercises to examine life values and behavioral commitments to life values, thus, the overall movement in the combination treatment of ACT for couples and OCD (where each consisting of the couple (couple therapy) and individual (OCD therapy) sessions are held separately) was the same way (40-42). This protocol was evaluated by experts and showed an excellent Content Validity Index (CVI) and Content Validity Ratio (CVR).

#### Results

All participants were women with the mean age of 31 years. Three were graduate students, and the other three were doctoral students. Their fields of study were different and included engineering, art, management, psychology, and etc. The average duration of their marriage was four years. Most of them had suspicions about infidelity, and the average duration of their obsessive-compulsive symptoms was two years.

- Visual analysis of participants in the overall score of the new PROCSI

The results related to inter-situational visual analysis for participants in the new PROCSI showed that all participants in the baseline stage showed stable changes concerning the stability envelope. However, in the treatment phase, changes in the fifth and sixth participants have the highest stability (100%). Also, the relative and

absolute level change of all participants in the treatment phase (comparing the two halves of the treatment) was negative, and accordingly, the

trend of their changes has decreased. Thus, it can be said that the scores of all participants on the new PROCSI have changed.

**Table 1.** Cross-situational visual analysis for participants in the New PROCSI

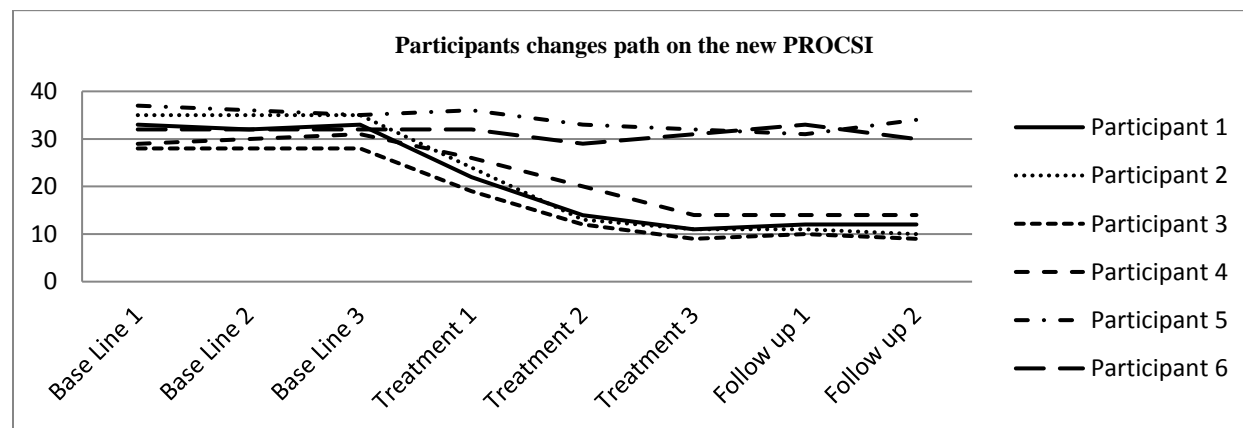
Compare the position	Base line and treatment stage					
	1	2	3	4	5	6
Participants						
Trend changes						
Direction change						
The type of trend	Negative	Negative	Negative	Negative	Negative	Negative
Stability change	Stable to variable	Stable to variable	Stable to variable	Stable to variable	Stable to stable	Stable to stable
Level change						
Relative level change	18 to 32.5	35 to 18.5	28 to 15.5	30.5 to 23	35.5 to 34.5	32 to 30.5
Absolute level change	33 to 22	35 to 24	28 to 19	31 to 26	35 to 36	32 to 32
Middle change	33 to 14	35 to 13	28 to 12	30 to 20	36 to 33	32 to 31
Average change	32.66 to 15.66	35 to 16	28 to 13.33	30 to 20	36 to 33.66	32 to 30.66
Data overlap						
PND	100	100	100	100	66.66	66.66
POD	0	0	0	0	33.33	33.33

PND: Percentage of Non-overlapping Data, POD: Percentage of Overlapping

As shown in Table 1, the participants' median, average, relative, and absolute scores decreased from baseline to treatment stage. Also, except for participants 5 and 6, the rest of the participants from baseline to treatment showed stable changes. In addition, the overall trend of participants' scores from baseline to treatment stage was negative, indicating a decrease in their scores on the new PROCSI from baseline to treatment stage. Also, as shown in Table 1, the PND and POD of the participants 1, 2, 3, and 4 were 100 and 0, respectively, indicating the high

efficacy of combined treatment of ACT for OCD and couples as well as the ACT for OCD for these participants in terms of changing scores of the new PROCSI. However, the PND and POD of participants 5 and 6 obtained 66.66 and 33.33, respectively, which indicate a relative efficacy of ACT for couples in the relative decline of the new PROCSI score of these participants.

A visual analysis diagram of participants at the new PROCSI is presented along with midlines and stability envelope of the baseline and treatment steps in Diagram 1.









**Diagram 1.** Participants change paths on the new PROCSI

As shown in Diagram 1, the first and second participants receiving the combined treatment of ACT for OCD and couples and the third and fourth participants receiving the ACT for OCD showed the most significant reduction in the new PROCSI. As such, it can be said concerning the mentioned content that the combined treatment of ACT for OCD and couples was the most effective method in reducing the score of new PROCSI of participants compared to the other two treatments.

- Visual analysis of participants in the overall score of the new ROCI

The results related to inter-situational visual analysis for participants in the new ROCI showed that all participants in the baseline stage showed a stable change concerning the stability envelope. However, in the treatment phase, changes in the fifth and sixth participants have the highest stability (100%). Also, the relative and absolute level change of all participants in the treatment phase (comparing the two halves of the treatment) was negative, and accordingly, the trend of their changes has decreased. Thus, it can be said that the score of all participants on the new RCI has decreased.

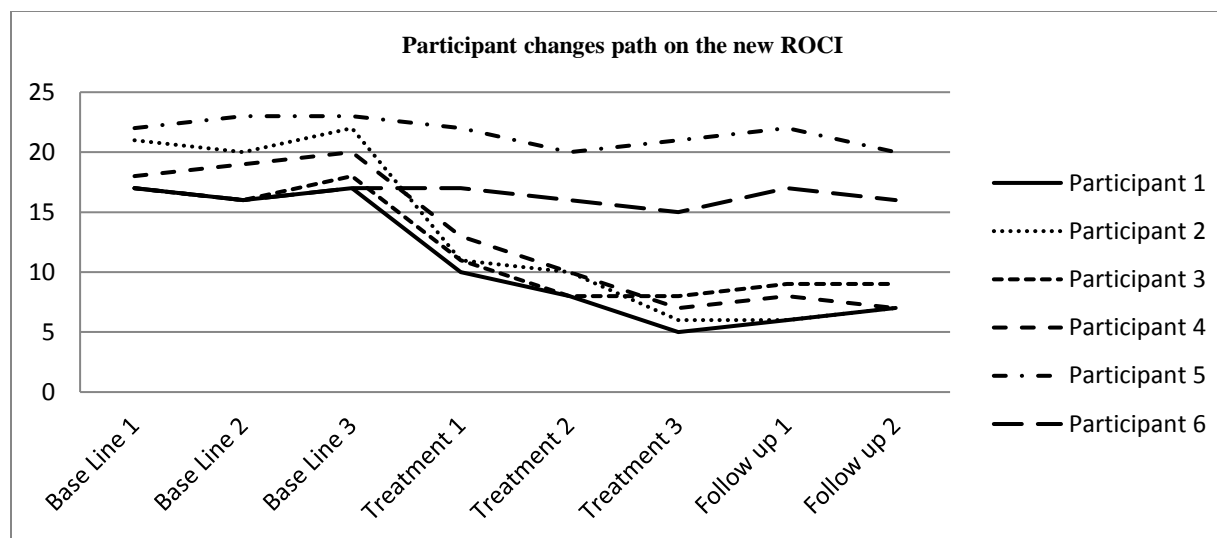
**Table 2.** Cross-situational visual analysis for participants in the New ROCI

Compare the position	Base line and treatment stage					
	1	2	3	4	5	6
Trend changes						
Direction change						
The type of trend	Negative	Negative	Negative	Negative	Negative	Negative
Stability change	Stable to variable	Stable to variable	Stable to variable	Stable to variable	Stable to stable	Stable to stable
Level change						
Relative level change	9 to 16.5	10.5 to 21	9.5 to 17	11.5 to 19.5	21 to 23	16.5 to 16.5
Absolute level change	10 to 17	11 to 22	11 to 18	13 to 20	22 to 23	17 to 17
Middle change	8 to 17	10 to 21	8 to 17	10 to 19	21 to 23	16 to 17
Average change	7.66 to 16.66	9 to 21	9 to 17	10 to 19	21 to 22.66	16 to 16.66
Data overlap						
PND	100	100	100	100	66.66	33.33
POD	0	0	0	0	33.33	66.66

PND: Percentage of Non-overlapping Data, POD: Percentage of Overlapping

As shown in Table 2, the scores of participants' median, average, relative, and absolute levels decreased from baseline to treatment. Also, except for participants 5 and 6, the rest of the participants from baseline to treatment showed stable changes. In addition, the overall trend of clients' scores from baseline to treatment was negative, indicating a decrease in their scores on the new ROCI from baseline to treatment. Also, as shown in Table 2, the PND and POD of the participants 1, 2, 3, and 4 were 100 and 0, respectively, indicating the high efficacy of combined treatment of ACT for OCD and couples as well as the ACT for OCD for these

participants in terms of changing the total score of the new ROCI. However, the PND and POD of participant 5 obtained 66.66 and 33.33, respectively, which indicates a relative efficacy of ACT for couples in the relative decline of the new ROCI score of the participant. However, the PND and POD of participant 6 obtained 33.33 and 66.66, respectively that indicates the inefficiency of ACT for couples in reducing the total score of the new ROCI of the participant. A visual analysis diagram of participants at the total score of new ROCI is presented along with midlines and stability envelope of the baseline and treatment steps in Diagram 2.



**Diagram 2.** Participant changes path on the new ROCI

As shown in Diagram 2, the first and second participants receiving the combined treatment of ACT for OCD and couples and the third and fourth participants receiving the ACT for OCD showed the most significant reduction in the new ROCI. As such, it can be said that the mentioned that the combined treatment of ACT for OCD and couples has been the most effective in reducing the total score of new ROCI of participants compared to the other two treatments.

## Discussion

The current study showed that the individuals who participated in the combined treatment of ACT for OCD and couples showed the highest rate of remission and most significant effect size in terms of improvement of symptoms of ROCD compared to other clients.

ACT for OCD, in particular, addresses the functional context underlying OCD and its associated anxiety. Highly valued thoughts, reassurance, and avoidance of internal experiences occur in this functional context. Therefore, it can be said that ACT focuses more on the function of the obsessions rather than reducing their frequency (17).

Although ACT does not focus on reducing symptoms, due to the focus on functional context and increased psychological flexibility to obsessions, symptom reduction occurs as a consequence of this condition, and in the current study, we also saw this happen. The critical point is that due to the decrease in the control of

annoying thoughts and the increase in psychological acceptance of these thoughts, which is one of the most important goals of the ACT, one can expect that symptoms of ROCD can also be seen in clients, especially those who experience ACT for OCD, conditions that also occurred in the present study. Obsessions can result from a failure in the initial control of thoughts, which in turn leads to an extreme effort to suppress the thoughts, and its result is to intensify and reinforce these thoughts. Ultimately, the effort to control the thoughts increases and the cycle of extreme effort continues (43,44). Phenomenological reports of OCD also emphasize that the primary complaint of many individuals with OCD is the inability to control obsessions mentally, and its witness is the frequency, intensity, and duration of the annoying thoughts (45). Consistent with the current study, the efficacy of this treatment in improving OCD has been demonstrated in the uncontrolled case study (46) and controlled studies (15,24). For example, the study by Twohig et al. (15) using multiple baseline designs showed that patients with OCD significantly decreased obsessive-compulsive symptoms after ACT and three months follow-ups. Also, in line with the current study, Twohig et al. (24), in one of the most extensive randomized controlled trials of ACT for OCD, showed that ACT had a more significant change in the severity of OCD at post-test and follow-up compared to progressive relaxation.

On the other hand, one of the most important reasons for the greater efficacy of the combination

therapy of ACT for OCD and couples in the current study, compared to ACT for OCD and ACT for couples on improving OCD, is the simultaneous use of ACT for OCD and ACT for couples in order to improve the communication texture of couples whom one of them had OCD. In fact, in line with the current study, results of the research show that OCD harms relationship function (47), and these effects, in turn, exacerbate the symptoms of OCD. For example, the pressures that people with OCD exert on their spouses to act on their obsessions are one of the factors of relationship tensions and conflicts and impair the quality of relationships (48). Accordingly, the spouse's compliance with symptoms of OCD (by reassuring the person, checking or preventing contaminated objects) results in the formation of an interpersonal dynamic that contrasts with exposure-based treatment (29).

This interpersonal dynamic is associated with an increase in the severity and duration of symptoms of OCD and impairment of one's overall performance and is a risk factor for long-term problems in people with OCD (29,30). Thus, it can be expected that with the focus of the combined treatment in this study on the treatment of OCD and couples (due to the deleterious effect of obsession on the communication context), this treatment is more effective than OCD or couple therapy alone.

On the other hand, according to the results of this study, the role of ACT components such as acceptance, cognitive defusion, mindfulness, valueness, and commitment to it can be considered according to the clients' path of change. People with OCD feel an extreme need to control their thoughts, and many with ROCD prefer avoiding communication conflicts. Beliefs about the over-importance of thoughts in individuals with OCD include this feature: paying attention to the thought is important because it happens, and there is a potential for Thought Action Fusion (TAF) (49). In OCD, beliefs about controlling thoughts are closely related to the over-importance of thoughts (49,50). Paradoxically attempting to control these thoughts will increase the frequency of these thoughts (44,51).

Thus, ACT, with the help of components of acceptance and cognitive defusion, can play a significant role in reducing the control of thoughts and the TAF associated with OCD. In the present

study, we saw the most changes in clients after the sessions of acceptance and cognitive defusion. The results of some studies consistent with the current study have shown a relationship between the component of cognitive defusion and therapeutic outcomes. For example, Zettel and Hayes (52) and Zettel and Rains (53), both comparing ACT with Cognitive Therapy (CT), concluded that cognitive defusion mediated the effects of ACT on patients with depression.

Another component that led to significant changes in the mid-to-late-stage process of ACT different forms was increased awareness of the present moment. Consistent with the current study, the results of various studies have shown that mindfulness-based interventions have positive consequences for a wide range of psychological problems (54-57). Also, the results of various studies indicate the effectiveness of mindfulness on OCD.

Also, the component of valueness and action based on it was another therapeutic component influencing improvement of OCD. Consistent with the current study, the impacts of valueness and action based on it have been shown in various studies based on ACT. For example, Lundgren et al. (57) showed that achieving the values of life in epileptic individuals mediates changes in quality of life and psychological well-being from the pre-treatment to the follow-up period. Vowles and McCracken (58) also found that increasing practice based on values was associated with decreased depression and distress in patients with chronic pain. One of the limitations of the current study is the limited number of individuals with ROCD and having specific demographic characteristics to participate in clinical interventions such as being a student, etc.

Also, not being equal the number of combined sessions of ACT for OCD and couples with the number of sessions of ACT for OCD and ACT for couples, not using placebo to increase internal validity, performing multiple evaluations (baseline, treatment sessions, and follow-up evaluations) by the researcher and performing all three treatments of combined treatment of ACT for OCD and couples as well as the ACT for couple and ACT for OCD by the researcher because of the limited access to other therapists, and the time limitation of conducting this research are other limitations of the current study.



## Conclusion

It can be said that the combined protocol of ACT for OCD and couples has been the most effective in decreasing relationship obsessions of clients compared to the ACT for OCD and ACT for couples alone.

## Acknowledgments

We must thank all the participants and specialists who collaborated with us to conduct this research. We would also like to thank Shahed University for financial support in conducting this research. The authors declare any conflict of interest.

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