

Effectiveness of Cognitive-Behavioral Treatment Community on Progress in Patients with Obsessive-Compulsive Disorders

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Abstract

Background: The latest recommended psychological choice for the treatment of OCD is a therapeutic intervention. The meta-analytic study has found that the strongest degree of scientific evidence for CBT is the effect of OCD psychiatric therapies. We conducted the present study to examine the efficacy of group cognitive-behavioral therapy in patients with enhanced obsessive-compulsive disorder.

Methods: The study was a quasi-experimental with a manipulate group, pre-test, and post-test. 32 women were referred to counseling offerings and psychological services in Bandar Abbas province from November 2019 to April 2020, who were purposefully chosen from the 80 individuals narrowed down according to the inclusion criteria. Afterwards, they were randomly (by envelopes) assigned to the experimental and control groups. The experimental group (n=16) was treated with cognitive-behavioral therapy for 12 weekly 90-minute sessions while the control team (n=16) obtained no treatment. At the beginning of the study, after 10 weeks, all the participants were tested with the Yale-Brown Obsessive-Compulsive Questionnaire. In addition to descriptive statistics, standard deviation, and the mean and inferential statistics, we employed one-way analysis of covariance and LSD. For the statistics analysis SPSS software program model 18 was used.

Results: In the current study, the mean and standard deviation of the ages were 26.78 ± 2.80 in the experimental team and 28.50 ± 3.56 in the control group, respectively. We discovered a significant effect in the experimental group's obsessive-compulsive signs following the cognitive-behavioral therapy ($P=0.005$). In addition, the suggested ratings for the participants in the experimental team were significantly lower than those in the control group ($P<0.001$).

Conclusion: According to the findings, it could be inferred that cognitive-behavioral therapy could significantly reduce OCD symptoms. It is recommended that the therapists, particularly in Iranian clinicians, apply this method.

Keywords: Cognitive-behavioral therapy, Patients, Obsessive-compulsive disorder, Schools

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1. Introduction

Obsessive-compulsive disorder (OCD) is characterized by continual repetitive ideas that lead into an increase in nervousness or depression (obsessions) and ritualistic moves (compulsions) and severe pain-reduction behavior. Obsessions and compulsions are frequently theme-based and functionally linked (for example, pollution and harm) (1). Among the normal population, the common occurrence of OCD has been found to be up to 3% (2). Approximately 20% of all the identified humans experience symptoms of OCD at the age of 10. Childhood/adolescent OCD is usually associated with odor, violence, somatic, alignment, washing, testing, and repeating compulsions. Sexual and religious obsessions are more prominent in young adults relative to kids or adults with OCD (3).

condition, and in its path, the signs change over time (4). The disorder is significantly associated with a healthy lifestyles of patients, in the lookup Global Burden of Diseases, OCD has been listed as the 10th cause of years living in illness international (5). To date, it has been regarded as a condition that is very challenging to handle. With the advent of contemporary and environment-friendly therapeutic methods, including exposure and response prevention (ERP) therapy, cognitive-behavioral therapy (CBT), and anti-obsessive treatments, this perspective has shifted dramatically a long time (6, 7). Despite this advancement, OCD is regularly under-diagnosed in medical practice, as most patients do now not recognize the symptoms of the condition, and health practitioners do no longer constantly examine them throughout the clinical examination of the affected person (4).

OCD is believed to be a chronic neuropsychiatric

In the cognitive approach, Emmelkamp and

colleagues primarily used cognitive concepts in the therapy of a case of obsessive-compulsive disorder. They used Ellis' rational-emotional remedy to trade irrational beliefs about the disorder. The center of attention was then shifted from general irrational beliefs to precise dysfunctional beliefs based totally on Beck's cognitive hypothesis (8). Recent studies have also shown that an efficient remedy of exposure and response prevention (ERP) depends on an alternate in irrational beliefs, which is the groundwork of cognitive therapy (6, 7).

Researchers believe that the successful treatment of obsessive-compulsive disorder based on cognitive theory requires the correction of effective beliefs on the misinterpretation of disturbing thoughts as well as the correction of behaviors that contribute to the persistence of these beliefs. This indicates the significant impact of cognitive-behavioral therapy (CBT) and that it is mandatory for the improvement of obsessive-compulsive disorder (9-11). In this type of treatment, on top of identifying and correcting negative evaluations, interventionist thoughts increase the exposure behaviors and reduce avoidance behaviors by modifying attitudes related to the sense of responsibility and preventing neutralization behaviors that arise following a negative evaluation affected by the feeling of responsibility. Thus, cognitive-behavioral therapy (CBT) reduces the symptoms of obsessive-compulsive disorder (12).

Moreover, group therapy has been found to be more effective on treating this disorder compared to individual therapy since in obsessive patients there is a kind of shame and embarrassment due to unacceptable thoughts and meaningless repetitive behaviors. Therefore, the patients often try to hide their thoughts; they have their own beliefs and even behaviors that are less familiar with other obsessive people. Hence, group therapy is a good experience for normalizing the symptoms of obsessive-compulsive disorder (13). Research has proven that cognitive-behavioral group therapy leads to a tremendous reduction in obsessive-compulsive symptoms in the experimental team compared to the manipulate team (14). A study discovered that cognitive-behavioral group therapy effectively reduces the severity of obsessive-compulsive symptoms and unexpectedly improves a patient's quality of life (15).

In a study, researchers concluded that each of the cognitive-behavioral methods, cognitive-behavioral combined with exposure and prevention of response

and medication, reduce the symptoms of obsessive-compulsive disorder (14, 16). Most literature on cognitive-behavioral therapy includes behavioral interventions alone, cognitive interventions alone, or a combination of cognitive and behavioral interventions (17-20). Our results revealed that the combined interventions are significantly different from each of these methods alone and lead into further improvement (20, 21). According to the findings of the aforementioned study, cognitive-behavioral therapy is a form of treatment that aims to modify the habits triggered by inadequate and inappropriate learning, and it also attempts to alter perceptions, values, and contradictory values. Considering the above-mentioned concerns about the detrimental effects of this condition on the individual's life cycle, despite the efficacy of cognitive-behavioral group therapy, the current study aimed to assess the efficacy of cognitive-behavioral group therapy for enhancing the symptoms of obsessive-compulsive disorder. The present research also aimed to examine whether group cognitive-behavioral therapy could be effective on enhancing the conditions of the patients with obsessive-compulsive disorder.

2. Methods

The study research design was quasi-experimental with a control group, pre-test, and post-test, 32 people counseling offerings, and psychological services in Bandar Abbas city, Iran, from November 2019 to April 2020. The subjects were chosen via purposive sampling approach and randomly divided into two experimental groups (CBT) (n=16) and control the group (n=16). Based on the analysis by Waller et al. (22), G-Power was used to choose 35 individuals as the test sample, taking into account the OCD variable and the highest standard OCD deviation ($m_1=11.8$, $m_2=7.2$ with the expectation of a 35% reduction in the OCD rating due to the intervention, $sd_1=sd_2=6.6$, $\alpha=0.05$ and $\text{energy}=\text{eighty percent}$). Considering the sample loss, the pattern measurement was 32.

$$N = \frac{(s_1^2 + s_2^2)(Z_{1-\frac{\alpha}{2}} + Z_{1-\beta})^2}{(\mu_1 - \mu_2)^2}$$

The inclusion criteria comprised the patients with an age ranging from 20 to 40 years, the diagnosis of OCD identification focusing on the Yale-Brown obsessive-compulsive scale ratings, the absence of any other leas medication three months ahead of the study, and the absence of psychosis symptoms. Non-participation in

meetings, Absence of more than two therapy sessions, inconsistent attendance at therapy sessions, skewed and unfinished surveys were excluded from the research. The community cognitive-behavioral therapy intervention was based on the latest practical guide for psychological distress (23) for 12 sessions (duration of each session was 90 minutes), which were conducted for 12 weeks once a week.

After determining the groups, we explained to the participants that the topic and intent of the study focused on therapeutic methods. They signed informed consent forms after the requisite explanations. In order to assess the magnitude of OCD, both groups were tested before and after the intervention utilizing (YBOCS) designed by Goodman et al. Initially, the 16 sealed treatment envelopes were mixed with the 16 sealed treatment party envelopes and shuffled like a card deck. When we are confident that, the deck of envelopes was shuffled very thoroughly, a unique number was sequentially written with a pen on the front of each envelope from 1 to 32. Inside the envelope, the carbon paper moved this number to the allocation document inside. The respondents then chose the envelopes that were put in a sequential order in the lidded container. It should be noted that this paper is the result of a dissertation accepted by the Deputy Head for Education, Islamic Azad University of Ahvaz, Science and Research Division REC, by the first author of a Ph.D. in Clinical Psychology (IR.AUA-coded. REC.1397. 1453214) (Figure 1).

Yale-Brown Obsessive- Compulsive Scale (Y-BOCS): Goodman and colleagues devised this tool in order to assess the severity of OCD (24). This scale is

a standardized measurement tool, assessing obsessions and compulsions on a 5-point Likert scale, with both health professional and self-report forms accessible. The scores range from 0 (no symptoms) to 4 (severe symptoms) and the total score is determined according to the number of items 1 to 10 and therefore, can range from 0 to 40, which is regarded as an OCD cut-off point of 17 or larger. For obsessive-compulsive disorders with ample sensitivity and precision, the Persian version of CY-BOCS is a reliable personality assessment measure. In the patients diagnosed with OCD, the reliability coefficient based on numerous reports is 0.98, and its internal accuracy through the alpha coefficient of Cronbach is 0.98 (25) (Table 1).

2.1 Statistical Analysis

Due to the existence of a dependent variable (obsession), an independent variable with two levels (Experiment and control group) and a covariate variable (pre-test) were examined. The efficacy of the method was analyzed through analysis of covariance (ANCOVA). However, it is noteworthy that before performing the analysis of covariance, we employed Kolmogorov Smirnov test to ensure the normality of the dependent variable distribution. All the statistical analyses were performed with SPSS 18.

3. Results

In the present study, the mean and standard deviation of age were 26.78 ± 2.80 in the experimental group and 28.50 ± 3.56 in the control group, respectively. Moreover, the mean and standard deviation of duration of disorder (the length of time that people had an

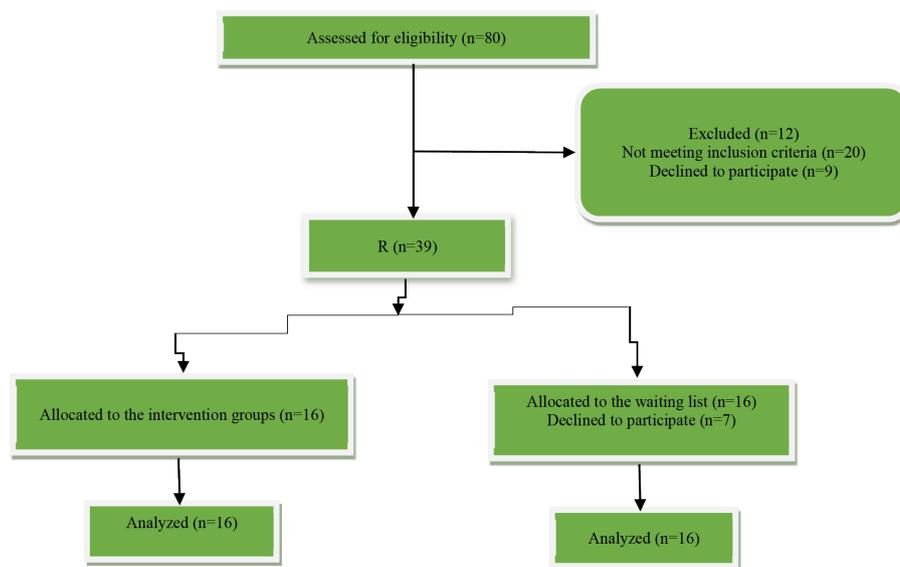


Figure 1: The participant's flowchart.

Table 1: Behavioral cognitive experimental group

<p>First session</p> <p>Introducing themselves to the group members and ask them to introduce themselves to others.</p> <p>Introducing the group rules.</p> <p>Psychological education: compulsive obsessive-compulsive disorder, defining important psychological terms.</p> <p>Homework: discussing the existing barriers, completing the review sheets.</p>
<p>Second session</p> <p>Review and homework</p> <p>Psychological education: study of cognitive-behavioral model, introduction of cognitive distortions and irrational underlying beliefs.</p> <p>Homework: reviewing cognitive distortions.</p>
<p>Third session</p> <p>Review and homework check</p> <p>Psychological education: the effective treatment strategies for obsessive-compulsive disorder to familiarize the patients with this disorder, recommending them to read books on the subject.</p> <p>Homework: reading the introduced books.</p>
<p>Fourth Session</p> <p>homework check</p> <p>Psychological education: a study of the strategies to combat cognitive distortions.</p> <p>Homework: identifying irrational underlying ideas and cognitive distortions using mind record sheets.</p>
<p>Fifth Session</p> <p>Review and homework check</p> <p>Psychological education: introduction of other cognitive behavioral therapy methods associated with the type of disorder.</p> <p>Homework: reviewing cognitive behavioral therapies and thinking about what they tend to do.</p>
<p>Sixth Session</p> <p>Review and homework check</p> <p>Psychological training: anxiety management training (breathing control, muscle relaxation).</p> <p>Homework: practicing anxiety management, practicing and getting prepared for visual confrontation.</p>
<p>Seventh session</p> <p>Review and homework check</p> <p>Psychological training: how to express emotions positively to family members.</p> <p>Homework: expressing your emotions to family members.</p>
<p>Session eight</p> <p>Review and homework check</p> <p>Psychological education: introducing exposure and prevention of obsessive and ritual behaviors and thoughts, practicing anxiety management during the session.</p> <p>Homework: cognitive reconstruction, completing thought logs, practicing anxiety control.</p>
<p>Ninth session</p> <p>Review and homework check</p> <p>Psychological training: exposure during the session and prevention of intellectual and practical obsessions.</p> <p>Homework: practicing exposure and preventing ritual thoughts and behaviors.</p>
<p>Tenth session</p> <p>Review and homework check</p> <p>Psychological training: prevention of obsessive and ritual thoughts and behaviors, practicing anxiety control during the session, real and visual confrontation.</p> <p>Homework: cognitive reconstruction, completing thought registration sheets, practicing confrontation, and prevention of obsessive and ritual thoughts and behaviors, practicing anxiety control.</p>
<p>Eleventh session</p> <p>Review and homework check</p> <p>Psychological education: discussion of effective factors in the disease recurrence.</p> <p>Homework: practicing strategies to prevent obsessive-compulsive disorder in the future.</p>
<p>Twelfth session</p> <p>Review and homework check</p> <p>Psychological education: a review of the prevention strategies for relapse.</p> <p>Homework: reviewing the assignments of the previous sessions.</p>

obsessive-compulsive disorder) in the experimental group and the control group were (2.37 ± 3.50) and (2.14 ± 2.06), respectively.

Our subjects included 32 people who were placed in two treatment groups: cognitive-behavioral therapy (CBT) (16 people), and the control group (16 people).

Table 2 presents the demographic information of the subjects, including gender, education, and age. According to the results of the chi-square test, we found no significant differences regarding the sex and education between the groups at the level of 0.05. Meanwhile, in the age variable, there was a significant difference between the two groups at the level of 0.05.

Table 2: Demographic information of the subjects

Variable		CBT	Control	Chi-squared	t	P
Sex	Men	6	9	1.12	-	0.47
	Women	10	7			
Academic level	<Diploma	2	3	0.24	-	0.88
	Diploma	3	3			
	Collegiate	11	10			
Age Mean (SD)		26.78 (2.80)	28.50 (3.86)	-	-25.38	0.001

CBT: cognitive-behavioral therapy; t: statistic; p: level of significant

Table 3: Mean and standard deviation and Results of ANCOVA test of obsession score in experimental and control groups with control of pre-test effect

Variables	Groups	Experimental	Control	F	P	η^2
		Mean \pm SD	Mean \pm SD			
Obsession	Pre-test	21.93 \pm 3.15	23.68 \pm 6.19	9.14	0.005	0.240
	Post-test	16.06 \pm 1.52	24.12 \pm 2.75	116.91	<0.001	0.801

F: test of equality of variances; P: level of significant; η^2 : Eta squair

In this analysis, to show the normality of the results, the Kolmogorov-Smirnov test was used, whose significance level was obtained ($P=0.20$) and could be considered to be normal with high confidence according to the value of the significance level. We also utilized the Leven test to evaluate hypothesis, whose significance level was obtained ($P=0.35$), which shows the uniform distribution of variances across all the levels of the research variable. Moreover, the significance level and the value of F between the group and the pretest ($F=3.009$, $P=0.09$), indicating the homogeneity of the regression slope, was observed.

As could be seen in Table 3, the trend of the changes in the mean scores of obsession from pre-test to post-test in the experimental group is on a decrease, yet in the control group, the amount of scores from pre-test to post-test has not changed significantly and even increased to some extent. Additionally, according to this table, it could be seen that after removing the share of pre-test variable from the dependent variable, the independent variable of the treatment was able to significantly reduce obsessive scores ($F=116.91$, $P=0.001$, $\eta^2=0.801$). Based on the ETA square, we could conclude that the Independent variable explains 80% of the dependent variable changes.

4. Discussion

The current study was conducted to determine the effectiveness of cognitive-behavioral group therapy on improving the symptoms of obsessive-compulsive disorder. The findings herein revealed that community cognitive-behavioral therapy was substantially

successful in improving obsessive-compulsive disorder (8, 10, 14, 16, 20).

Sayyah and colleagues (2016) studied the impacts of group cognitive-behavioral training on the decrease of OCD symptoms in female respondents with multiple sclerosis (MS). A substantial decrease in obsessive-compulsive symptoms of the study community was observed following cognitive-behavioral therapy (26). Tsuchiyagaito's and colleagues found that OCD patients with ASD responded to CBT significantly. In the left occipital lobe, OCD patients with ASD had a slightly lower amount of gray matter than OCD patients without ASD. The non-remission group had a substantially lower amount of gray matter in the left dorsolateral prefrontal cortex (DLPFC) following the partialization of autistic traits relative to the remission group (27).

Külz and colleagues also investigated the effectiveness of mindfulness-based cognitive therapy (MBCT) as a complementary option for the treatment (28). There were no substantial advantages of MBCT in the post-treatment over OCD-EP, with the Yale-Brown-Obsessive – Compulsive Scale (Y-BOCS) as the main outcome test, with the Obsessive-Compulsive Inventory. In addition, the response rate and the improvement of the secondary outcomes, such as addictive beliefs and quality of life within the MBCT community, were substantially greater. The non-completion rates were less than 10%. OC symptoms in both groups improved during the 6-month follow-up; the differences between the groups were no longer significant. The results indicated that MBCT

contributes to the increased improvement of self-reported OC symptoms and secondary outcomes relative to a psychoeducational program, but not to clinician-rated OC symptoms (28). Külz and colleagues suggested that both interventions founded similar and stable results in improvement of OCD patients, but little improvements in the mid-term; thus, additional treatment options might be needed (28). A recent meta-analysis of remote CBT for OCD included 18 studies out of which 7 were online interventions. The author concluded that remote treatments for OCD with low and high intensity result in great magnitude changes in OCD symptoms. These treatments were observed to be successful and are not meaningfully different from face-to-face care ineffectiveness (29).

Therapy using ERP approach involves creating a hierarchy of symptoms in describing this finding, ranging from minimum fear-producing to maximum, and then leading the person through exposure to Hierarchy items until the highest possible level items are clearly understood. Furthermore, avoidance of reaction is given, whereby the client is asked to refrain from performing the compulsions that would alleviate the anxiety or distressing emotional reaction, or to reapply the exposure instantly after the compulsions which were performed as a result of fear. In resolving pollution concerns, the procedure concentrates on suspected contaminating causes. They ask the person to stop the ritual washing. If the individual “slips” and washes, re-contamination should be recommended immediately afterwards. ERP requires exposure in the strictest sense to the feared stimulus and then effectively ‘waiting’ for the discomfort to subside by habitual circumstances (14). Therapeutic variables, including the promotion of exposure disturbance, the provision of patient reassurance, and the treatment of peripheral symptoms rather than core fear, could impede the breakdown of the association that was feared, increasing the risk of recurrence. In addition, behavioral compulsions (repeating words and phrases to alleviate anxiety for instance) might be easily overlooked and thereby, impede recovery due to their non-observable nature. Therapists may fail to realize them, overlook them for obsessions, or erroneously teach patients to recognize mental compulsions in a way that would lead to a support and encouragement ritual (30).

5. Conclusion

This study analyzed the effect of group cognitive-behavioral therapy on reducing OCD symptoms in a

group of patients. The results highlighted that community cognitive-behavioral therapy could be an efficient method of minimizing patients’ OCD symptoms. This indicates that the participants should be at the level of seriousness of the condition so that the process of treatment would be uniform. Follow-up classes are recommended since people with this condition are more likely to relapse due to unfounded beliefs.

One of the drawbacks of this research was that the severity level in the sample groups of the obsessive-compulsive disorder was not as same as that in the participants who were divided in three levels of mild, moderate, and serious. Obviously, the therapist’s experience has a big impact on the treatment effectiveness, which could be considered as a limitation. The performer may have insufficient experiences in this regard. Completing the questionnaire took about 40 minutes per person. Another limitation herein as a non-random sampling method which makes it difficult to generalize the findings.

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Ethical Approval

The Ethics Review Board of Islamic Azad University of Ahvaz approved the present study with the following number: coded IR.AUA. REC.1397. 1453214.

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Conflicts of interest: None declared.

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