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The Effect of Acceptance and Commitment Therapy on the Frequency and Severity of Symptoms of Obsessive Compulsive Disorder

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Abstract

This study investigated the effectiveness of acceptance and commitment therapy in obsessive- compulsive disorder. A single case design used in five patients with obsessive-compulsive disorder. Yale Brown Obsessive Compulsive Scale, Beck Depression Inventory-II, Beck anxiety Inventory and a processing measure was used for assessment of patients. Results suggested the significant decreases in all measures in post test in five patients and these results maintained at 1-month follow up. Process of treatment and results from this study suggest that Acceptance and Commitment Therapy can be effective intervention for difficult thoughts, feelings, and behaviors seen in OCD.

Introduction

In new revised version of Diagnostic and Statistical Manual of Mental Disorders, the Obsessive Compulsive Disorder (OCD) is classified as one of the anxiety disorders diagnosed with intrusive thoughts (obsessions) and unwanted repetitive behavior (compulsions). This disorder has been identified as one of the most common and the most debilitating psychological disorders and is the fourth common psychological disorder after phobia, drug abuse and depression. Its incidence rate estimation is 2.6% during a lifetime. The clinical prognosis is weak for the people who are not seeking for treatments [1].

The effectiveness of the best present psychological therapy for OCD, namely Exposure and Response Prevention (ERP) is between 60-85%. However, this treatment is not without limitations. Between 15-40% of individuals not only do not respond to the ERP, but around 25% of these people reject exposure and other 2-12% quit the therapy during treatment's period. Benefits obtained by such therapies is reduced in clients who either have a weak motivation for being cured or do not have appropriate health information which reduces their level of satisfaction from therapy. In fact, any exposure to obsession is a difficult treatment. The client is requested to confront his or her biggest fear and not to exhibit any preventive behavior and is requested to let his or her anxiety being reduced. This is certainly a reason for high level of client drop and rejecting therapy on their part. In addition, treatment of specific types of compulsions has been observed difficult using ERP; compulsions like the obscure compulsions and hoarding. In response to these limitations, the OCD's cognitive theories were developed. Unfortunately, though there is a great level of agreement regarding a major cognitive aspect's intervention in OCD, the cognitive interventions either alone or combined with exposure were not more effective than the exposure treatment itself [2].

Some alternative theories have recently been developed for this approach which states that development of clinical improvement requires any direct change of contents of thoughts, emotions or physical symptoms. These theories, which are named behavior therapy's third wave, target the functions of the cognitions and emotions instead of changing their form, frequencie or their situational sensitivity. Some examples of these interventions include the Dialectical behavior therapy, Integrative couple behavioral therapy, Mindfulness based upon cognitive therapy and the focal point of the present research, namely Acceptance and Commitment Therapy [3].

Acceptance and Commitment Therapy which is briefly named ACT is a third wave behavior therapy which explicitly accepts this approach (changing the function of thoughts and emotions instead of transforming their form, content or frequency). ACT originates from a philosophical theory called functional contextualism and is based on a research program about language and cognition which is called Relational Frame Theory. ACT has six central processes resulting in psychological

flexibility. These six processes include: acceptance, defusion, self as a context, relationship with present moment, values and the committed action [4]. The individuals affected by OCD, unhealthily focus on their own obsessions and enter in a wide range of escape and prevention behaviors in order to change the form or frequency of obsessive thoughts [1]. One of the ACT's key processes in relation with OCD is the cognitive defusion that consists of adjusting verbal contexts so as to reduce both the individual's acceptance of his/her beliefs and the tendency for responding to those thoughts, while there is no need to reduce the frequency or transforming their form. The ACT's interventions have demonstrated a significant increase regarding the tendency for taking part in difficult activities simultaneous with experiencing difficult emotions [5].

ACT's central processes teach people how to stop thought inhibition, how to prevent from being mixed up with intrusive thoughts and they allow the individual to tolerate the unfavorable emotions more [6]. Many of the clinical symptoms of OCD including prevention, thought inhibition, quality of a disturbed life, mood disorders are appropriate for Acceptance and Commitment Therapy [7]. In general, ACT seeks for allowing the client to make a new relationship with obsessive thoughts and anxiety instead of controlling thought, inhibiting thought, prevention, seeking for reassurance and etc. As a result, the obsessive thinking should be experienced as one thought and anxiety should be felt as one emotion and this, in turn, leads the person to concentrate on performing valuable and important tasks instead of spending much time for trying to reduce obsessive intrusive thinking and to prevent from anxiety.

Recent studies conducted about ACT have provided some satisfactory results and logical reasons for using ACT in clinical activity, in particular, working with the patients affected by anxiety disorders. In area of the obsession, Twohig, Hayes and Masuda studied ACT as a therapy of OCD for 4 patients. The results showed nearly complete reduction of compulsions for all the participants at the end of the therapy; together with reductions in the standard scales of obsession, anxiety, depression and preventing from an experience which also continued for a three-month follow-up period. In addition, regarding the scales of the therapy's process, all the participants showed that they have a higher tendency toward experiencing obsessive thoughts, while, they believe less in obsessive thoughts in terms of the result of therapy [8]. In this regard, the effectiveness of an ACT treatment program consisting of 10 sessions without inside-the-session exposure was studied and assessed on 5 patients affected by obsessive compulsive disorder.

Materials and Methods

A single case design controlling baseline was used in this study. It took four weeks to complete the baseline period for each client. The information of the baseline was collected once a week for four weeks, and after spending four weeks of data collection, all clients attended at 10 ACT's one-hour sessions which were held weekly. The therapist (first author) has enough experience for taking part in ACT's educational workshop in the theorist's presence.

The clients were selected out of the visitors of two consultation centers. The client's entry and exit criteria in this research were: 1- Diagnosis of the obsessive-compulsive disorder according to DSM-IV-TR. 2- Minimum age of 18 years. 3- The client has not started a new psychological therapy during last month and has not made any changes in dosages of drugs. 4- When the client is being treated with this therapy, he/she is not under treatment by any other psychological therapies and he/she should complete the previous psychological therapies till one month before beginning this therapy. 5- The client should not have any psychotic disorder or he/she should not be affected by an organic mental disorder which contributes to the study.

Seven clients obtained the entry and exit criteria. Some information about the type of therapy, manner of their attendance at the session, the number and time of the sessions were given to the clients. Secrecy was explained as the basic principle in the treatment. Amongst 7 clients, 5 individuals declared their own satisfaction from participating in the therapy. All 5 clients participated in the sessions planned for evaluation prior to the therapy.

The first client was 40 years old married man whose main obsessive thought was being affected by a disease. He was strongly scared of being affected by cancer and frequently underwent several medical examinations to see whether he has developed cancer or not. As well as taking frequent examinations, he asked his family to reassure him about this case and was really annoyed by surfing and searching via the Internet looking for the symptoms of cancer, its types and how a person may develop this decease. Since he has been only 20 years old, he has experienced the symptoms of obsession in various ways (religious thoughts, checking, washing) and has undergone many medical treatments.

The second client who was 38 years old married woman was greatly suffering from blasphemous thoughts at the time of saying her prayers and also offensive thoughts against Shea Imams. Due to having anxiety and strong sense of guilt caused by such thoughts, she developed different obsessive actions like washing her mouth, fasting, almsgiving, saying prayers, explicit and implied neutralization and etc. Her OCD began after giving birth to her second child namely since five years ago and at first, washing was her first compulsion.

The third client was 29 years old married man whose main obsession was the thought of a bad event happening for all his family members. He frequently used to carefully examine his family members, especially his daughter by telephone to make sure that she is healthy and nothing has happened to her. He believed that he has had intrusive thoughts from childhood; however, they have been intensified and annoying during recent two years.

The fourth client was a twenty-two years old female student who had the obsessive thought of her mother being affected by Alzheimer's disease. Since one year ago

till now, even the negligence of his mother about the most trivial things caused him to have this obsessive thought that her mother had certainly developed Alzheimer and he continuously asked her mother to recall what she had forgotten. Such thought resulted in both his academic failure and his severe dysfunction.

Finally, the fifth client had a repetitive obsessive thought about impurity and purity. He used to become upset while noticing the smallest perceived sign of impurity and it made him perform all the difficult washing acts. He was a thirty-year-old married woman affected by time-consuming and difficult washing rituals at bathroom, toilet and her own 2 years old child. She believed that the symptoms had begun from the age she has been accountable for her religious actions and she has more or less suffered from OCD during these years.

Units of Measurement

Yale-Brown Obsessive Compulsive Scale (YBOCS): A semi-structured interview which has intensity scale and obsessive-compulsive symptoms scale and evaluated the level of OCD's intensity during the present conditions of disease. This scale includes: 1- amount of spent time; 2- level of interference; 3- level of anxiety; 4- level of resistance and 5- the level of control and it evaluates the symptoms of obsessions and compulsions separately [9]. Dadfar et al. reported r=0.98 as the reliability among clients for this scale, α= 0.98 as its internal consistency coefficient and r=0.84 as its reliability coefficient using test-retest method within two weeks. Also, using Beck's depression inventory and Hamilton's anxiety grading scale, its diagnostic reliability has been reported 0.64 and 0.59 respectively [10].

Beck Depression Inventory (BDI): This inventory was developed in order to measure the severity of depression in 1963 by Beck and it was revised in 1994. This scale includes 21 items and each item is scored from 0 to 3. The highest score is 63 in this questionnaire. Each one of the items measures one of the depression symptoms [11]. Ghasemzadeh et al. stated α =0.78 as the alpha coefficient of this questionnaire, r=0.74 as its retest coefficient and r=0.93 as its correlation with Beck depression inventory's first version [12].

Beck Anxiety Inventory (BAI): It is a self-assessment scale containing 21 questions which assesses the level of anxiety. BAI has a high level of internal consistency (α=90), and its retest coefficient is r=60 and an average to high concurrent and diagnostic validity has been reported for it [13]. Studies show that this test has high reliability and validity and its internal consistency is high (r=0.92) and data correlation varies from 0.30 to 0.76. The inventory's reliability was perceived high through two times of test administration after one week (r=75). The correlation between Beck's depression inventory and Beck's anxiety inventory is 0.48 [14].

Therapy process's scale: In this scale which was performed every week, the client responds to three questions: "how much does the obsession bring you about anxiety and distress? "To what extent do you believe in obsessions?", "how much do you feel that you must react to your own obsession?" every question is scored (1=not at all, 5=very much) on Likert's range. These three questions are named distress, believability and willingness [8].

The diagnosis of OCD was determined for each client using a clinical interview. The demographical data necessary for it was collected. Some manuals were given to every client and they were taught to tick a mark in the page related to each day of committing a compulsion and do this for four weeks (baseline period). Also, the clients were asked to respond to the scale of treatment process once a week. The clients referred to the consultation center after four weeks. In a structured interview, Yale Brown Obsessive Compulsive Scale was performed, the clients responded to the inventories and they were requested to further review their compulsions on a daily basis until the end of their therapies and also during the follow-up period. Then, each one of the clients participated in 10 one-hour acceptance and commitment sessions. The scaling of treatment process was done every week. One week after the therapy, YBOCS and other inventories were redone and the clients were requested to refer to the center for other four weeks to be evaluated and during this period, they were asked to further review the frequency of compulsions on a daily basis and continue weekly scaling of the treatment process.

Results

The present study evaluated the effectiveness of Acceptance and Commitment Therapy in five patients affected by OCD. The effectiveness of this therapy on reducing the frequency of compulsions, intensity of obsessive symptoms, depression, anxiety and increased willingness to have obsessions was measured. A single case-study design with baseline design was used in this study. The results were analyzed not only by descriptive format but also by using diagrams (Table 1).

The frequency of the compulsions: Figure 1 shows the results of self-monitoring made regarding compulsions by each one of 5 clients in diagram format. All 5 clients showed very high reduction in period of the therapy compared to the baseline period and this reduction was maintained with respect to all 5 clients during the follow-up period.

The average of first client's compulsions within 4 weeks of baseline was 14.87 and its standard deviation was 0.82. These results during 10 treatment weeks were 3.98 and 3.53 respectively. Namely, a considerable reduction was observed in the frequency of compulsions and this reduction continued until one month after the therapy; namely, within four follow-up weeks, the average of compulsions was 2.02 with standard deviation of 0.86. The second client did not show much reduction with average of 19.57 and standard deviation of 1.72. During the baseline period, the client did not have much reduction after beginning of therapy; however, she demonstrated a significant reduction from the third week (SD=5.47, M=4.94). This reduction was also continued during the follow-up period (SD=0.64, M=1.77). The average of the third client during baseline was 7.85 with 0.68 of standard deviation.

These results reached M=2.84 and SD=1.55 during the therapy period and they reached M=2.52 and SD=0.61 during follow-up period. The fourth client committed an average of 13.65 times of checkout obsessive action daily within first four weeks with 6.01 of standard deviation. During 10 therapeutic sessions, this client showed a significant reduction in the obsessive actions (M=3.15, SD=1.91) and he also maintained this reduction during the four follow-up weeks (SD=0.79, M=186). The fifth client committed washing obsessive action with an average of 19 times per day (SD=3.75). During treatment period, the mean frequency of washing obsessive action reached 4.38 (SD=4.83) and the client maintained trend of reduced frequency of obsessive washing action for one month after treatment (M=1.71, SD=0.7). Table 2 shows the scores of all 5 clients based on Yale-Brown's obsessive-compulsive scale, Beck depression inventory and Beck anxiety inventory. The scores of all 5 clients showed reduction in accordance with Yale-Brown's obsessive-compulsive scale. These reductions were clinically significant as the scores of all five clients reached below the cut-off point of this scale (namely 18). All the clients showed reductions in both Beck's depression inventory and anxiety inventory and such reductions also continued during the follow-up period. Since the scores of all five clients (except for client 3 in Beck depression inventory) during the treatment & follow-up periods were less than 21(cut-off point of these two scales), these reductions were also clinically significant.

According to the treatment process scale which has also been shown in table 3, a reduction of distress, belief in obsession and having a willing for it was noticed and these changes also continued for one month after the treatment period.

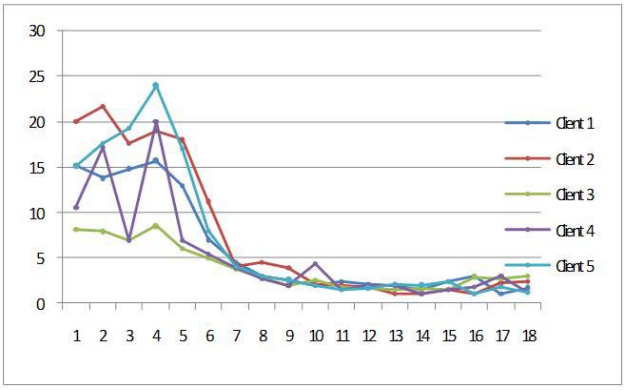

Figure 1. Frequency of client's compulsions during baseline, therapy and follow-up periods

Table 1. Demographical characteristics of five clients

	Client 1	Client2	Client 3	Client 4	Client 5
Gender	Male	Female	Male	Female	Male
Marital status	Married	Married	Married	Single	Single
Age	40	38	29	22	30
Level of education	16	12	16	14	12
Type of obsession	Illness/checking	Religious/neutralization	harm/checking	Illness/checking	contamination/washing
Previous therapy	Medicine	Medicine	-	-	Medicine +exposure
Comorbid disorder	Depression+ panic disorder	-	Depression	-	Depression
Current drug	Citalopram+fluoxetine	Fluvoxamine	-	-	-

Table 2. Scores of Yale-Brown, Beck Depression and Beck anxiety inventories before and after therapy and follow-up

	Client 1			Client 2			Client 3			Client 4			Client 5		
	B	A	F	B	A	F	B	A	F	B	A	F	B	A	F
YBOCS	35	15	17	30	18	15	27	11	11	30	15	17	31	17	15
obsession	18	8	9	12	9	7	15	8	7	13	9	10	13	8	7
compulsion	17	7	8	18	9	8	12	3	4	17	6	7	15	9	8
BDI-II	34	14	13	22	9	11	41	20	21	15	7	6	27	14	9
BAI	37	15	8	18	7	8	22	12	10	10	4	4	21	6	7

YBOCS= Yale-Brown Obsessive-Compulsive Scale
BDI-II = Beck Depression Inventory
BAI= Beck Anxiety Inventory
B= before
A= after
F= Follow-up

Table 3. Means of treatment process's scale during baseline, treatment and follow-up periods

	Client 1			Client 2			Client 3			Client 4			Client 5		
	B	A	F	B	A	F	B	A	F	B	A	F	B	A	F
Distress	4.25	2.5	2.57	4.6	2	2.5	3.5	1.9	2.23	4.15	5	2.12	4	2.25	2.5
believability	4	2	2.5	5	2.65	2.65	3	1	1.5	3	2.25	2.36	2	2.45	1.78
willingness	5	1.8	2.5	5	2.34	2	4	1.5	2.25	5	3	5	5	2.75	2.5

B= before
A= after
F= Follow-up

Discussion

The present article showed the effectiveness of 10 sessions of ACT intervention on 5 patients affected by OCD. The reductions were highly desirable in terms of compulsion's monitorings and also in terms of YBOCS and it was also maintained during one-month follow up period. Some positive changes were also noticed in terms of anxiety and depression of all 5 clients. This therapy was accompanied by significant reductions in level of belief in obsession, mental distress and necessity to react to the obsession. These results are consistent with the results of ACT's previous studies [8].

The inside-the-session exposure was not used in this therapy; however, the behavioral commitment practices necessarily included confrontations with the obsessive situations outside of session. Using the defusion and acceptance techniques reduced level of client's harassment in these situations. Although, the frequency and content of obsessions was not directly targeted in this therapy, the reduction of anxiety in obsessive situations as the result of using defusion and acceptance techniques and also detailed discussions about the individual's values and objectives and necessity of specifying values led toward reduced obsessions and compulsions. In this therapy, instead of stressing on exposure, increasing the tendency of the individual toward experiencing real-life situation internal events was emphasized. Here, therapy aimed at assisting the individual to experience an obsession only as a thought and to try to take measures for what is important for him or her in life which is in line with his or her own values instead of responding to the obsession, i.e. the existence of obsession was not a challenge by itself, the major problem was the attempts made by the individual to respond to the obsession(i.e. the obsessive action). In fact, the purpose of this therapy was to increase the individual's behavioral treasury in the presence of fearful events (i.e. obsessions); what is named "psychological flexibility" [3]. As it was clear in results obtained by YBOCS and other scales, this approach resulted in reduced significance of the obsession and obsessive compulsion; however, this reduction in obsessions and compulsions was not directly targeted in any stages of the therapy. In fact, ACT's central processes taught the clients how to quit an idea of thought's inhibition, how to defuse their intrusive thoughts, to reinforce their self-observation instead of having a self-conceptualization, to accept internal events instead of controlling them, specify their values and then deal with them.

As it was previously mentioned, ACT studies are at their preliminary stage [15]. Therefore, more evidences are required with regards to the mechanism of this therapy. However, there are evidences which state that a change made of acceptance and defusion are interventions of the events, not making changes in the cognitive or emotional content. However, it is necessary to take more measures in this regard and, in particular, in Iran. The treatment process and the results achieved in this study indicate that ACT can be an appropriate therapy for OCD. Thus, further controlled studies should be performed in this respect in order to study and compare the differences and similarities of this therapy with other OCD treatments. On the other hand, since this therapy was performed without inside-the-session exposure, it can be a suitable therapy for those clients who reject exposure-oriented treatments.

The present study also had some limitations. The first limitation of this study was its case-study design which leads to reduced generalization of results. Other limitation was evaluating the obsessive symptoms by the therapist himself or herself. This limitation may be removed through measuring the obsessive symptoms both before and after the treatment and then being follow-up by an assessor who is unaware of the therapy process.

Despite all these limitations, the present study is a starting point for studying alternative approaches adopted for treating problematic thoughts, emotions and behaviors which are observed in OCD.

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Authors' Contributions

All authors had equal role in design, work, statistical analysis and manuscript writing.

Conflict of Interest

The authors declare no conflict of interest.

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