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THE EFFECTIVENESS OF COGNITIVE BEHAVIOURAL THERAPY ON TREATMENT OF OBSESSIVE COMPULSIVE DISORDER

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ABSTRACT

The general aim of this study was to develop and test new treatment strategies for enhancing the efficacy of Cognitive Behavioral Therapy (CBT) in the treatment of obsessive compulsive disorder (OCD). The statistical population of present study was including all OCD patients that referred to psychiatry clinics of Dr Kia Kojuri, Chalus, Iran, and their OCD was endorsement by psychiatrists. Sample study was selected by purposeful method and 5 patients was selected based on acquire the higher score of Yale Brown obsessive compulsive scale which was assessed by psychiatrists at pre and post treatment. CBT was administered on participants by the researcher for 20 sessions during 75 days, twice a week for two 45 min. The treatment was conducted in groups with 5 participants. Then, after 24 hours of the 5, 10, 15 and 20 sessions, Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) were redistributed among participants, filled by them and returned to researcher. Results showed a decreasing trend of obsessions in patients and statistical analysis showed significant difference between different stages of treatment except for comparisons between 1 with 2 and 2 with 3 stages. Findings showed a decreasing trend of compulsions in patients and paired statistical analysis showed significant difference between different stages of treatment except for comparisons between 1 with 2 and 2 with 3 stages at 95% confident level. Overall, CBT is an effective treatment for OCD and has the potential to improve the treatment of OCD in different ways.

Keywords: *Cognitive Behavioral Therapy, Obsessive Compulsive Disorder*

INTRODUCTION

In the fifth version of the diagnostic manual of mental disorders (DSM'5), obsessive compulsive disorder (OCD) refers to the presence of obsessions and/or compulsions (American Psychiatric Association, 2013). Obsessions are defined as recurrent intrusive thoughts, images, or urges that cause distress, which the individual tries to suppress or ignore (American Psychiatric Association, 2013). Compulsions are described as repetitive (overt or covert) behaviors the individual display in response to either an obsession or according to rigidly applied rules (American Psychiatric Association, 2013). The primary function with compulsions is to reduce distress, or to prevent a feared event or situation (American Psychiatric Association, 2013). The revision from DSM'IV to DSM'5 did not have any major effect on the specific OCD diagnostic criteria (American Psychiatric Association, 2013), but in the fifth version, OCD was moved from the anxiety disorders to a new chapter called “obsessive compulsive and related disorders” together with body dysmorphic disorder, trichotillomania, skin picking disorder, and hoarding disorder (American Psychiatric Association, 2013). Although the DSM 5 description of OCD suggests a functional relationship between obsessions and compulsions (i.e. obsessions evoke distress, compulsions relieve distress), it is technically possible to have obsessions without having compulsions (also known as “pure obsessions”) (American Psychiatric Association, 2013), similarly, it is possible to have compulsions without having obsessions (American Psychiatric Association, 2013). The “pure obsessions” diagnostic subtype has been questioned, implying that what appear as “pure obsessions” are in fact covert compulsions (Williams *et al.*, 2011). OCD is a prevalent disorder. The first prevalence study on OCD in 1942 found a prevalence of only 0.3% (Roth and Luton, 1943). Later studies that use more reliable assessment tools have found an average lifetime prevalence of 1-2.5% and an estimated twelve' month prevalence of 1-1.3% (Fontenelle *et al.*, 2006). Common comorbid conditions found with OCD are depression (Karno *et al.*, 1988), social anxiety disorder (Lopez'Sola *et al.*, 2014), eating disorders (Altman and Shankman, 2009), schizophrenia (Swets *et al.*, 2014), and tic-related disorders (Diniz *et al.*,

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2006). Elevated ADHD symptoms are observed in children with OCD (Abramovitch *et al.*, 2013), but findings are mixed in adult samples. There is also a proposed link between autistic traits and OCD (Bejerot, 2007), and in one study (Russell *et al.*, 2005) about a quarter of patients with autism also fulfilled the diagnostic criteria of OCD. The longest prospective longitudinal study on OCD, conducted by Skoog & Skoog (1999) in Sweden from 1947 to 1993, found that, although a majority of patients improved, almost half the sample still had clinically relevant OCD symptoms for more than 30 years. Different symptom dimensions also affect the course of OCD. In a naturalistic two year follow up study, Mataix *et al.*, (2002) found that patients who clustered in the hoarding and sexual/religious obsessions domain did not improve as much as with other OCD subtypes. Similar results were found in another study (Eisen *et al.*, 2013), with additional findings that patients with obsessions relating to over responsibility for causing harm had better improvement rates. Furthermore, one study (Kichuk *et al.*, 2013) indicated that symmetry OCD may have an earlier age of onset than other OCD subtypes and patients with taboo thoughts often have a more fluctuating course in contrast to symmetry OCD. Thus, OCD is a prevalent condition and it appears that different phenotypes have different courses in the development and maintenance of OCD. Cognitive behavior therapy (CBT) is an effective treatment for OCD. In the psychological model of OCD, the patient exposes him/herself to the CS (i.e. the obsession) and refrains from rituals and other compensatory behaviors (Barlow, 2008). This is known as “exposure with response prevention” (ERP) (Barlow, 2008). Through repeated ERP, the fear/anxiety response is hypothesized to be gradually extinguished (Craske *et al.*, 2014). Recent research has also suggested that ERP does not only result in fear extinction, but the patient also develops better anxiety toleration and an increased sense of self-efficacy (Craske *et al.*, 2008). In addition to ERP, cognitive interventions change the establishing operations i.e. reduce negative appraisals and reinforce the patient in refraining from rituals. Meyer (Barlow, 2008) was the first to test ERP for OCD in the 1960s, and the first randomized trial was published a few years later (Marks, 1975). Subsequent, numerous trials testing CBT for OCD have found large effect sizes that appear to be equal, irrespective of whether the treatment content is focused on cognitive or behavioral factors (Gava *et al.*, 2007).

According to the cognitive model of OCD, interventions should be aimed at changing the individual's belief system, which, in turn, reduces the negative appraisals in relation to the obsession, and this, in turn, makes the patient less prone to rely on compulsions (Rachman, 1991). Although the full cognitive therapy packages has shown efficacy in several trials (Wilhelm *et al.*, 2009), there are few experimental research studies that test the specific mediating effects of cognitive interventions i.e. do these interventions really change obsessive beliefs? And does this change in obsessive beliefs really mediate symptom reduction? As mixed findings are reported on this (Woody *et al.*, 2011), there is a need to investigate the role of cognitive interventions in CBT. Knowledge about the mediating effects of specific interventions in CBT is important because it can provide clues on how to further enhance this treatment (Kraemer *et al.*, 2002). The general aim of this study was to develop and test new treatment strategies for enhancing the efficacy of CBT in the treatment of OCD.

MATERIALS AND METHODS

The statistical population of present study was including all OCD patients that referred to psychiatry clinics of Dr Kia Kojuri, and their OCD was endorsement by psychiatrists. Sample study was selected by purposeful method and 5 patients was selected based on acquire the higher score of Yale Brown obsessive compulsive scale which was assessed by psychiatrists at pre and post treatment. All of the participants sign and certify the moral adaptive. CBT was administered on participants by the researcher for 20 sessions during 75 days, twice a week for two 45 min. The treatment was conducted in groups with 5 participants. Then, after 24 hours of the 5, 10, 15 and 20 sessions, Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) were redistributed among participants, filled by them and returned to researcher.

Instruments

The Structured Clinical Interview for DSM-IV Axis I Disorders: Clinical Version (SCID-CV) will assist in making standardised and accurate diagnoses that incorporate DSM-IV by a systematic probe for

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symptoms that might otherwise be overlooked. This interview incorporates the benefits of structured interviewing and makes more accurate and reliable diagnoses without resorting to the lengthier and more complex process used principally in research studies. Specially designed for use in clinical settings, the SCID-CV covers those DSM-IV diagnoses most commonly seen by clinicians and includes the full diagnostic criteria for these disorders with corresponding interview questions.

The SCID-CV may be administered to either psychiatric or general medical patients. It is most appropriate for adults (18 years and over), but with slight modification, may be used with adolescents. The ratings on the SCID-CV are judgements about the diagnostic criteria and not necessarily the patient's answers to the questions. The clinician is required to make a clinical judgement as to whether a diagnostic criterion is met. The SCID-CV is ordinarily administered in a single setting and takes 45-90 minutes.

Yale-Brown Obsessive-Compulsive Scale (Y-BOCS): The scale was developed to measure the degree of obsessive-compulsive symptoms in 1980. The first five items which measure the obsession include;

- The time spent for obsession.
- The interference due to obsession.
- The problems due to obsession.
- Resistance
- The degree of controlling obsession.

The second five items measure the compulsion. The range of scores for each item is 0-4 and the total score is 20-40. The patients should answer Yale –Brown symptom checklist before scoring the scale. The checklist is developed to investigate obsessive and compulsive symptoms. The psychometric properties of this scale (i. e., reliability and validity) are valid and acceptable to measure the severity of obsession-compulsive symptoms. The validity of the scale is measured as 0.93 (Rabiei *et al.*, 2011). The scale consists of two sections; 1) an inventory of investigating symptoms that specifies the time and content of the obsessions and compulsions 2) the severity of obsessions and compulsions that is determined via scoring. The scoring of the scale is based on the investigating list of symptoms as the patient specifies the severity of his/her obsession using the numbers on the scale. The sum of the obtained scores shows the severity of obsessions and compulsions separately.

Data analysis was conducted with descriptive & inference statistics. In descriptive statistics analysis, means & standard deviation & in inference statistics part of the analysis Paired t-test was used to analyze research hypotheses. All analysis was done by SPSS 16 software.

RESULTS AND DISCUSSION

Descriptive result of obsessions in different stages of CBT showed in table 1, highest score seen in stage 1 and lowest score was at 5th stage of CBT treatment. These findings showed a decreasing trend of obsessions in patients. For more understand of CBT treatment on participants, paired statistical analysis showed significant difference between different stages of treatment except for comparisons between 1 with 2 and 2 with 3 stages at 95% confident level (Table 2).

Table 1: Descriptive analysis of participant's obsessions at different stages

time	Mean	SD
Stage 1	14.60	7.635
Stage 2	10.00	7.382
Stage 3	8.40	6.148
Stage 4	7.20	5.630
Stage 5	6.20	5.215

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Table 2: Pairwise comparisons of participant's obsessions at different stages

time	DM	SD	SE	t	p
Stage 1 vs Stage 2	4.600	4.82701	2.15870	2.131	0.100
Stage 1 vs Stage 3	6.200	4.49444	2.00998	3.085	0.037
Stage 1 vs Stage 4	7.400	5.02991	2.24944	3.290	0.030
Stage 1 vs Stage 5	8.400	5.41295	2.42074	3.470	0.026
Stage 2 vs Stage 3	1.600	1.34164	0.600	2.667	0.056
Stage 2 vs Stage 4	2.800	1.92354	0.86023	3.255	0.031
Stage 2 vs Stage 5	3.800	2.58844	1.15758	3.283	0.030
Stage 3 vs Stage 4	1.200	0.83666	0.37417	3.207	0.033
Stage 3 vs Stage 5	2.200	1.48324	0.66332	3.317	0.029
Stage 4 vs Stage 5	1.000	.707110	0.31623	3.162	0.034

Descriptive result of compulsions in different stages of CBT showed in table 3, highest score seen in stage 2 and lowest score was at 5th stage of CBT treatment. These findings showed a decreasing trend of compulsions in patients. For more understand of CBT treatment on participants, paired statistical analysis showed significant difference between different stages of treatment except for comparisons between 1 with 2 and 2 with 3 stages at 95% confident level (Table 4).

Table 3: Descriptive analysis of participant's compulsions at different stages

time	Mean	SD
Stage 1	13.40	7.60263
Stage 2	9.80	7.62889
Stage 3	8.60	6.87750
Stage 4	6.40	4.77493
Stage 5	4.00	3.74166

Table 4: Pairwise comparisons of participant's compulsions at different stages

time	DM	SD	SE	t	p
Stage 1 vs Stage 2	3.60	1.516	0.678	5.308	0.006
Stage 1 vs Stage 3	4.80	1.923	0.860	5.580	0.005
Stage 1 vs Stage 4	7.00	3.464	1.549	4.518	0.011
Stage 1 vs Stage 5	9.40	3.911	1.749	5.374	0.006
Stage 2 vs Stage 3	1.20	1.923	0.860	1.395	0.235
Stage 2 vs Stage 4	3.40	3.435	1.536	2.213	0.091
Stage 2 vs Stage 5	5.80	3.962	1.772	3.273	0.031
Stage 3 vs Stage 4	2.20	2.167	0.969	2.269	0.086
Stage 3 vs Stage 5	4.60	3.361	1.503	3.060	0.038
Stage 4 vs Stage 5	2.40	1.673	0.748	3.207	0.033

CBT is an effective treatment for OCD. CBT has the potential to improve the treatment of OCD in different ways. First, the effect sizes were in the same range as face to face CBT. Secondly, ICBT is an accessible treatment for the patient. The most common reasons for participation in the studies were either practical (e.g. it was not possible for the patient to visit a therapist during office hours) or because of geographical distance (e.g. the patient lived too far away from a psychiatric unit). The combination of high accessibility and being able to work with the treatment at home, while still having a high frequency of therapist support, is a major strength with this treatment format. The cognitive model for OCD is based on some assumptions: 1) non-clinical populations experience intrusive thoughts which are similar in content and form to the obsessive thoughts of OCD patients (Russell *et al.*, 2005); 2) the erroneous interpretation and the negative meaning assigned to the presence of such intrusive thoughts would be

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responsible for their increase in intensity and frequency, and for the transformation of “normal” intrusive thoughts into obsessions (Russell *et al.*, 2005). Salkovskis highlighted also the importance of the excess of responsibility in the origin of OC symptoms (Lopez'Sola *et al.*, 2014). Patients’ beliefs of being responsible for preventing future harm to themselves or to others would be the crucial ingredient to lead them to adopt behaviors aimed at neutralizing these possible risks, such as rituals and avoiding behaviors. The obsessions would persist while the erroneous or distorted interpretations persist and would decrease as these interpretations weaken. Accordingly, the lower the importance patients attribute to their intrusive thoughts, the lower the impulse to perform rituals (Lopez'Sola *et al.*, 2014; Swets *et al.*, 2014). A complement to cognitive theory for the origin of compulsions was proposed by Rachman (2002) in order to explain the origin of compulsions. Based on Salkovskis’ proposal that the overvalued responsibility would be the central issue in OCD, Rachman (2002) proposed an explanative hypothesis for the origin of compulsions. They would be repetitive, stereotyped and intentional acts performed by the patient in order to prevent future disasters. They are a kind of preventive behavior and, in general, are associated with indecision and doubt. The checking rituals would be performed when the person believes he/she has a great and special responsibility for preventing damages, especially regarding other people, is not sure that the risk of possible damages has been effectively reduced or removed, leading him/her to repeated verifications, as a way to eliminate doubt and possible risk (Frost and Steketee, 2002). The identification of dysfunctional beliefs in OCD patients has led some authors to propose and adapt cognitive techniques for the treatment of OC symptoms (Salkovskis *et al.*, 1998). In parallel, some clinical trials have proven the effectiveness of using cognitive therapy alone for the treatment of OCD (Oppen *et al.*, 1994; Whittal *et al.*, 2005), both for patients who have predominantly obsessions,39 who had been considered refractory to ERP therapy, and for patients with obsessions and compulsions (Cottraux *et al.*, 2001; McLean *et al.*, 2001). It was also seen a similar efficacy of cognitive and ERP therapies (Whittal *et al.*, 2005). Some of those studies, however, have undergone criticism: the time period destined to behavioral therapy was shorter than that dedicated to cognitive therapy.

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