The Effectiveness of Mindfulness-Based Cognitive Therapy (MBCT) Intervention on Mental Ruminations, Metacognitive Beliefs, and Perfectionism in Patients with Obsessive-Compulsive Disorder in Isfahan Province

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Abstract

Background and aim: the present study is aimed at investigating the effectiveness of mindfulness-based cognitive therapy (MBCT) intervention on mental ruminations, metacognitive beliefs, and perfectionism in patients with obsessive-compulsive disorder in Isfahan Province.

Method: the sample of the present quasi-experimental study was randomly selected from patients referring to centers for psychiatric and psychological services in Najaf Abad Township from December 11, 2015 to January 30, 2016, including 30 patients who were diagnoses to suffer from obsessive-compulsive disorder during clinical psychiatric interviews based on the DSM-5 conducted by a psychiatrist. Then, they were randomly divided into two 15 participant groups: the MBCT group and the control group. The experimental group received 8 intervention (MBCT) sessions and were assessed in two pretest and posttest stages using structured interviews, the Wells Metacognitive Inventory, and the Maudsley Obsessional Compulsive Inventory. Then, the results were analyzed using MANCOVA.

Findings: the results indicated that MBCT is significantly effective on mental ruminations, metacognitive beliefs, and perfectionism in patients with obsessive-compulsive disorder in Najaf Abad Township (p<0.05).

Conclusion: mindfulness-based cognitive therapy training is effective on the increase on individuals’ consciousness of the present time via skills such as attention to breath and body, consciousness to here and now, and then cognitive system and information processing. Therefore, regarding the effectiveness of this type of training in the field of Obsessive-Compulsive Disorder therapy and increase in the life quality, its expansive uses are recommended.

Keywords: mindfulness, ruminations, metacognitive believes, perfectionism, Obsessive-Compulsive Disorder.
1. Introduction

Obsession is in fact a thought, word, or image invading human beings, dominating their psychological organization, and agitating extensive anxiety in them in spite of their wills to consciousness (Dadsetan, 2009). Compulsion is a repetitive, cliché, and insignificant motor behaviors which enters individuals’ consciousness in a ruminant way and if individuals do not it, they face increasing stress and anxiety (Kaplan & Sadock, 2011). Obsessive-compulsive disorder is one of the relatively prevalent anxiety disorders in Iranian society and is considered a kind of disorder having significant percentage of the population referring to clinics and counseling centers. Theories presented in the field of obsession disorder and factors generating it were established in terms of neither experiential bases nor in terms of effective therapeutic methods in such a way that by the mid-1960s, obsession disorder was considered as a cureless disease resistant to therapy requiring lifelong treatment. In fact, instead of curing this problem, one should learn how to deal with it. But since the late 1960’s, behavioral powerful treatments have been establishing. Effective strategies such as “confrontation and prevention of responses” promising to have significant effects have been introduced so that they have been become as the selective treatment of this disorder (Astkty, 2008). So far, different theories such as biological, psychometric, psychological-social, cognitive, behavioral, and cognitive-behavioral theories have been to explain and present therapeutic models for this disorder. The relatively new and promising theory in explaining and curing obsessive-compulsive disorder in the framework of psychological approach is the theory of cognitive-behavioral therapy (Schwartz et al. 2005).

Cognitive theories of obsessive thoughts (Salkovskis, 1998) believe that cognitions related to false evaluations and beliefs are determinative in growing and surviving obsessive-compulsive disorder. In this regard, it can be said that cognitive therapy models (Carr, 1974 as cited in Grayson et al., 2003), cognitive model (MacFaul and Vlzhaym, 1998 as cited in Grayson et al. 2003), and Vitaly’s cognitive model (Vitaly et al. 2002). Vitaly et al. (2002) believed that in obsessive individuals have beliefs which cause false evaluation of unwanted thoughts and individuals face problems. These beliefs are giving too much importance to the thoughts, preoccupation lot of thought control, over estimation of the threat, intolerance of uncertainty and perfectionism. According to Vitaly’s cognitive model, individuals with obsessions have high perfectionism and tolerating obscurity and dilemmas is difficult for them. They try to change or reduce the intensity of these beliefs and thoughts in order to decrease obsessive thoughts in individuals. Vitaly et al. (2002) believe that cognitive therapies are effective on improving social performance and depression of patients with obsessive thoughts. Nowadays, in methods of behavioral therapy of obsession, training patients and informing them about their diseases as well as their roles in the process of treatment and doing homework are considered significant in such a way that research shows high degree of its improvement and survival in patients having such therapeutic programs (Houghton et al. 2006). In addition, to treat this disorder, the cognitive therapy method based on mindfulness in which patients are informed by internal and subjective representations can be also employed (Schwartz et al. 2005). In mindfulness, individuals is conscious in every moment of mental practices and learn skills for identifying more suitable methods. For mind, two main practices is considered: one is “to do” and the other is “to be”. In mindfulness we learn to move the mind from one method to another (Kabat- Zinn as cited in Segall et al. 2002). Mindfulness requires particular behavioral, cognitive, and metacognitive strategies for concentration of the process of attention resulting in preventing downward spiral of negative-mood-negative thought-tendency to worrying responses and growth of new views and
appearance of pleasant thoughts and emotions (Segall et al. 2002). Mindfulness-based cognitive therapy has been constructed out of the model of reducing stress based on Kabat-Zinn’s mindfulness. This type of cognitive therapy includes different meditations such as stretching yoga, basic training and several practices in cognitive therapy which indicate the relationship between mood, thoughts, feelings, and bodily senses. By mindfulness, it is the presentation of a biological-cognitive-behavioral method which gives new information about biological foundations of obsessive-compulsive disorder to patients in order that their abilities of controlling anxious responses and resistance against annoying syndromes of obsession increase. The main principle in creating these abilities is that patients learn the mode of controlling and managing fear and anxiety created by this disease by real natural of these thoughts and desires. In fact, managing fear per se provides this possibility for patients to control their behavioral responses more effectively. Therefore, patients use biological information and cognitive consciousness for confronting and preventing responses. The aim of concentration on using mindfulness-based cognitive therapy is providing more consciousness individuals’ thoughts and emotions. In fact, individuals learn to take their own thoughts as mental events instead of consider them from their own aspects or a reflection of reality via this therapy. This program teach skills to individuals in order to free from everyday disturbing cognitive habits particularly ruminant thought patterns in obsessive-compulsive disorder (Bowman et al. 2010).

2. Research method
2.1. Population
The population of the present research includes all patients referring clinics and psychiatric and psychological service centers in Najaf Abad Township. According to the diagnoses of psychiatrist or a clinical psychologist, these patients were suffering from obsessive-compulsive disorder via psychiatric and psychological clinical interviews based on the Fifth Diagnostic and Statistical Manual of Mental Disorders.
In the present study, a number of 30 patients suffering from obsessive-compulsive disorder were selected from among the population using the convenience sampling method. Then, they were randomly divided into two experimental and control groups and individually received mindfulness-based cognitive therapy. Participants answered tests in two stages and after receiving 8 treatment sessions.

2.2. Research instrument
In the present study, to assess characteristics and conditions, demographic forms, clinical interviews, clinical tests, Wells Metacognitive Inventory, and Maudsly Obsessive Compulsive Inventory (MOCI).

2.3. Data analysis methods
The data obtained from the present study were analyzed using Statistical Package in Social Sciences in SPSS-22 in such a way that firstly using descriptive statistics (frequency, mean scores, and SD) the data were analyzed. Then, using inferential statistics (MANCOVA) the research group was investigated.
3. Findings
Possible explanation for effectiveness of mindfulness-based cognitive therapy on ruminations, metacognitive beliefs, and perfectionism in patients with obsessive-compulsive disorder is that mindfulness-based therapy results in cognitive changes in the way of thinking and acting in patients and enjoys principles of conditioned reinforcement. That is individuals exert their efforts to see themselves in higher steps. This tendency consistently causes gradual and step-by-step improvement in patients. In addition to creating calmness and consciousness, it improves individual conditions and solve problems in face-to-face sessions (Roth et al. 2004). It seems that practices of mindfulness-based cognitive therapy along with increasing individuals’ consciousness towards the present time, via skills such as attention to breath and body, and concentration on consciousness to here and now have effects on the cognitive system and information processing. All subscales are directly scored and higher scores indicate higher levels in each scales.
To investigate the effectiveness of mindfulness-based cognitive therapy on rumination, metacognitive beliefs, and perfectionism, MANCOVA was used.
Firs assumption of MANCOVA: the first assumption of MANCOVA is interval and relativity of covariate and dependent variables. As mentioned in the scoring method of the three questionnaires, scales are interval in nature; as a result, for the first assumption of MANCOVA is realized.
Second assumption of MANCOVA: for investigation of the normality of pretest and posttest distribution, their distribution normality was investigated using the Kolmogorov – Smirnov Test.
Table 1: the Kolmogorov – Smirnov Test for investigating pretest-posttest distribution normality of the research scales

<table>
<thead>
<tr>
<th>Scales</th>
<th>Test type</th>
<th>No.</th>
<th>Mean scores</th>
<th>Value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ruminations</td>
<td>Pretest</td>
<td>15</td>
<td>55.37</td>
<td>0.73</td>
<td>0.60</td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>15</td>
<td>49.47</td>
<td>0.87</td>
<td>0.71</td>
</tr>
<tr>
<td>Metacognitive</td>
<td>Pretest</td>
<td>15</td>
<td>47.52</td>
<td>0.65</td>
<td>0.73</td>
</tr>
<tr>
<td>beliefs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>15</td>
<td>42.11</td>
<td>0.81</td>
<td>0.82</td>
</tr>
<tr>
<td>Perfectionism</td>
<td>Pretest</td>
<td>15</td>
<td>109.47</td>
<td>0.62</td>
<td>0.83</td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>15</td>
<td>113.19</td>
<td>0.83</td>
<td>0.46</td>
</tr>
</tbody>
</table>

Table 1 indicated that p-value in the Kolmogorov – Smirnov Test is bigger than 0.05. Regarding the results of data distribution according to normal distribution and the second assumption of MANCOVA is appropriately observed.

Table 2: Levine test for investigating the homogeneity of variances in covariate and dependent

<table>
<thead>
<tr>
<th>Homogeneity of covariate and dependent groups</th>
<th>F</th>
<th>df 1</th>
<th>df 2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rumination</td>
<td>3.07</td>
<td>1</td>
<td>26</td>
<td>0.08</td>
</tr>
</tbody>
</table>

http://www.ijhcs.com/index.php/ijhcs/index
As indicated in table 2, it can be identified that none of the significance level of scales are smaller than 0.05 and the null hypothesis of Levine Test stating homogeneity between covariate and dependent groups was confirmed and all these paired groups are homogenous. As a consequence, the conditioned assumption for MANCOVA is provided.

Main hypothesis: mindfulness-based cognitive therapy is effective on rumination, metacognitive beliefs, and perfectionism.

To investigate the effectiveness of mindfulness-based cognitive therapy on rumination, metacognitive beliefs, and perfectionism, MANCOVA was used. In this analysis, an experimental group and a control group were used in two pretest and posttest stages. The results of Box’s M Test for investigating homogeneity of the matrix are presented in table 3.

Table 3: the Box’s M Test for variables of rumination, metacognitive beliefs, and perfectionism.

<table>
<thead>
<tr>
<th>Box’s M</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>29.86</td>
<td>1.34</td>
<td>21</td>
<td>3341.65</td>
<td>0.23</td>
</tr>
</tbody>
</table>

Regarding the significance of the Box’s M Test, the null hypothesis of homogeneity of matrices is rejected and with insignificance of this test at the significance level 0.05, variance-covariance matrices are homogenous. Values of Wilks Lambda test are presented in table 4.

Table 4: Wilk’s Lambda test for investigating difference in mean scores of scales under study.

<table>
<thead>
<tr>
<th>Eigenvalues</th>
<th>F</th>
<th>df</th>
<th>Sig.</th>
<th>Eta</th>
<th>Statistical power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilk’s Lambda</td>
<td>0.38</td>
<td>27.01</td>
<td>6</td>
<td>0.01</td>
<td>0.77</td>
</tr>
</tbody>
</table>

Regarding table 4, value 0.38, and value F=27.01, with deletion of the effect of covariate variable, the mindfulness period has been effective at least on one of the scales of rumination, metacognitive beliefs, and perfectionism at the level p<0.01. In table 5, ANCOVA of group mindfulness cognitive therapy is investigated.

Table 5: ANCOVA of difference in effectiveness of group cognitive therapy on mindfulness

<table>
<thead>
<tr>
<th>Resource</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Eta</th>
<th>Power of test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rumination group</td>
<td>952.58</td>
<td>1</td>
<td>952.58</td>
<td>12.78</td>
<td>0.01</td>
<td>0.45</td>
<td>0.98</td>
</tr>
<tr>
<td>Error</td>
<td>1332.12</td>
<td>1</td>
<td>1332.12</td>
<td>29.84</td>
<td>0.01</td>
<td>0.55</td>
<td>1.00</td>
</tr>
<tr>
<td>Metacognitive beliefs</td>
<td>270.34</td>
<td>24</td>
<td>87.26</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Rumination group</td>
<td>187.40</td>
<td>1</td>
<td>187.40</td>
<td>30.39</td>
<td>0.08</td>
<td>0.21</td>
<td>0.19</td>
</tr>
<tr>
<td>Error</td>
<td>161.05</td>
<td>1</td>
<td>161.05</td>
<td>45.63</td>
<td>0.01</td>
<td>0.65</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Regarding table 5, the group mindfulness cognitive therapy period is effective on rumination, metacognitive beliefs, and perfectionism at the level p<0.01. The power of the test confirms the adequacy of the sample size. Considering the obtained results, the main hypothesis stating the effectiveness of group mindfulness cognitive therapy on rumination, metacognitive beliefs, and perfectionism is confirmed.

4. Discussion and conclusion
The results of MANCOVA in table 5 indicated that group mindfulness cognitive therapy is effective on rumination, metacognitive beliefs, and perfectionism in patients with obsessive-compulsive disorder (p<0.05). It means that in mindfulness metacognitive therapy period is able to decrease obsessive patients’ rumination, increase positive beliefs of patients with obsessive-compulsive disorder, decrease their negative beliefs about uncontrollability, increase beliefs about cognitive adequacy, decrease general negative metacognitive beliefs, decrease metacognitive beliefs about cognitive consciousness, decrease the patients’ perfectionism, and enhance the quality of interpersonal relationship between patients. These results are consistent with findings of studies conducted by Borjali, 2013; Abedini, 2013; Abdi Khan, 2014; Kazemini et al. 2011; Faramarzi, 2010; Sajjadian, 2008; Yousefi, 2015; Gol Pourchaman Kouhi, 2011; Arianpour, 2012; Bohlmeijer, 2010).

5. Suggestions for further research
The present study was individually conducted on a sample size with 30 subjects suffering from obsessive-compulsive disorder; therefore, it is recommended that in future studies, the same issue can be investigated on more subjects and in group. Regarding the fact that in these researches subjects who were at different educational levels were selected using the convenience sampling method, it should be noted that treatment methods and sessions can be applied using face-to-face training by therapists for patients with obsessive-compulsive disorder or even those with little literacy.
References


Clinical Psychology: Science & Practice, 10, 144-156.


