EFFECTIVENESS OF MINDFULNESS-BASED COGNITIVE THERAPY AND METACOGNITION THERAPY ON REDUCTION OF SYMPTOMS OF DEPRESSION, CORE SELF-EVALUATION AND EMOTION REGULATION DIFFICULTIES IN PREGNANT WOMEN WITH DEPRESSION

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Abstract

Objective: The present research was aimed to compare the effectiveness of mindfulness-based cognitive therapy and metacognition therapy on reduction of symptoms of depression, core self-evaluation and emotion regulation difficulties in pregnant women with depression.

Methodology: The research was quasi-experimental with pretest-posttest that used control group. In addition, 36 pregnant women referred to maternity ward of Shariati hospital in Tehran were selected using convenience sampling method. Consequently, they were randomly put into three groups including experiment group number one (n=15; under metacognition treatment), experiment group number two (n=15; under cognitive therapy treatment based on mindfulness) and control group (n=15). The participants completed the questionnaires of depression, core self-assessment and emotion regulation difficulties in three stages of basic line, after intervention and following up. The obtained data were analyzed using multivariate repeated measures model.

Findings: Data analysis using multivariate repeated measures model indicated that there were significant differences in the extent of depression, core self-assessment and emotion regulation in the three mentioned groups. Comparison of means also demonstrated greater effectiveness of cognitive therapy treatment based on mindfulness compared with metacognition treatment.

Conclusion: The results of the present research indicated that cognitive therapy treatment based on mindfulness can have a significant impact on improvement of emotional disorders during pregnancy and among pregnant women with depression. On other words, it could be a preferred method for improvement of depression during pregnancy.

Keywords: pregnant women, cognitive therapy based on mindfulness, metacognition treatment, depression, core self-evaluation, emotion regulation difficulties.

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Introduction

Pregnancy is one of the major stressors in life which can lead to emergence or exacerbation of tendency to depression. Prevalence of depression during pregnancy in first, second and third three months is 8.4%, 12.7% and 12%, respectively. Lack of diagnosis and treatment of depression during pregnancy could lead to creation of an undesirable feeling in mother and child. Moreover, pregnancy is an exceptional opportunity for screening of depression during pregnancy.

Short term treatments which have the same effects as long-term treatments, their therapists demand less trainings or even no training and are associated with lower costs have priority compared with long-term treatments. Metacognition treatment is among therapies that are based on Information Processing Model emphasizing change and compliance. Although this therapy is of short-term therapies, it is mostly based on strategies and processes which evaluate control and supervise cognitions. Metacognition is information which one has about recognizing his own internal feelings and
effective coping strategies\textsuperscript{6}. In addition, another new theory developed by Kabat-Zinn at the Medical Center of University of Massachusetts in 1979 refers to mindfulness-based cognitive therapy (MBCT)\textsuperscript{7}. According to what have been mentioned above, although there have been variety of studies on the extent of emotional disorders in pregnant women and psychological interventions, further investigation about the present subjects seems to be necessary. However, there have been no studies on the effectiveness of the two abovementioned therapies. The present research aims to compare the effectiveness of the two therapies on depression, core self-evaluation and emotion regulation difficulties in pregnant women with depression.

**Methodology**

The present research was quasi-experimental with pretest-posttest that used control group. The population consisted of all pregnant women who referred to maternity ward of Shariati hospital in Tehran from October to December in 2015. After obtaining approval among pregnant women from the hospital, 36 pregnant were selected using convenience sampling method. Consequently, they were randomly put into three groups including experiment group number one (n=15; under metacognition treatment), experiment group number two (n=15; under cognitive therapy treatment based on mindfulness) and control group (n=15). Inclusion for this study were informed consent and willingness to participate in research, ability to participate in meetings and collaborate on doing assignments, physical and psychological stability (no obvious sign of physical or psychological disorders which intervene during sessions), age interval between 18 and 48 and secondary school education at minimum. The exclusion criteria for the experiment group were absence of more than two sessions of intervention and not wanting to continue to participate in intervention sessions and the exclusion criteria for the control group did not want to continue to participate in intervention sessions.

**Implementation method**

Study at the maternity ward section of Shariati hospital in Tehran was conducted by two experts with M.A. degree in psychology who were familiar with experimental methods according to research ethics standards such as informed consent and confidentiality of participants. Participants were evaluated in three stages including basic line prior to intervention in experiment groups, post intervention and 2 months following up. The first experiment group received 8 sessions of treatment once a week for two hours based on mindfulness-based cognitive therapy\textsuperscript{8}. A summary of executive instruction of the treatment sessions is noted in the following.

**Measurement Instruments**

**Hamilton depression scale**

Hamilton depression scale was used in order to measure the extent of depression. This test was formulated and developed by Max Hamilton in 1960 to 1970\textsuperscript{9}. Core Self-Evaluation Scale (CSES-12) This scale was formulated by Judge et al. in 2003. The initial version of the scale consisted of 65 questions but changed to 12 questions after initial implementation which were used in core self-evaluation scale. In Iran, this scale was translated by Sheikh Shabani et al. (2011) and its validity was calculated to be appropriate in its Iranian version\textsuperscript{10}.

**Emotion regulation difficulties scale**

This scale is a 41-item self-report instrument which were formulated in order to evaluate difficulties in emotion regulation clinically. Gratz and Roemer (2004) expressed that these items were formulated based on multiple conversations with colleagues familiar with the texts of emotion regulation. Negative emotion regulation generalized pending scale was employed as a model in the development of this scale. In order to analyze the research data, descriptive statistical indices such as mean, standard deviation and frequency percentage and inferential statistical indices such as MANCOVA using SPSS software were used\textsuperscript{11}.

**Findings**

The age ranges of the participants were between 18 and 36. The average age of the participants were almost the same in the three groups and there was Mean and standard deviation of the components of depression, core self-evaluation and emotion regulation difficulty in pretest, posttest and following up were reported in table 1 according to the control and experiment groups.

The results of table 2 indicated that the components of depression, core self-evaluation and emotion regulation difficulty in the stages of pretest were almost the same in two groups of experiment
and control. Moreover, comparing the two groups of experiment and control in the stage of posttest indicated that mindful-based therapy shows more reduction in the average values of participants in the components of depression, core self-evaluation and emotion regulation difficulty compared with metacognition therapy. Hence the corrected values of Hoin-Flet were used in the present comparison. Assumption of homogeneity of variance was evaluated using Levene’s test which the results indicated establishment of this assumption. The findings on comparison of intergroup impact indicated that there is a significant difference between control group and experiment groups in the components of depression (F_{2,33} = 33.479, P < 0.0001, Partial Eta Square = 0.670), core self-evaluation (F_{2,33} = 77.69, P< 0.0001, Partial Eta Square = 0.825) and emotion regulation difficulty (F_{2,33} = 48.80, P <0.0001 0.0001, Partial Eta Square = 0.747).

The findings of paired comparison indicated that there is a significant difference between the two experiment groups under mindfulness-based therapy and metacognition therapy in the components of depression and comparison of mean values demonstrated that mindfulness-based therapy had a better effectiveness. In addition, comparison of experiment groups with control group indicated that there is significant difference between the mindfulness therapy experiment group and control group in terms of the extent of depression but there is not a significant difference between the metacognition therapy experiment group and control group.

**Conclusion**

According to the objective of the present research which was based on comparison of mindfulness-based cognitive therapy and metacognition therapy in group in improvement of depression, core self-evaluation and emotion regulation difficulties among pregnant women with depression, the findings of the present research indicated that mindfulness-based cognitive therapy in group led to improvement of symptoms of depression, core self-evaluation and emotion regulation difficulties among pregnant women after intervention and two months of follow up.
These findings are in line with previous investigations which showed that this program could be an effective socio-economic intervention in improvement of symptoms of depression\textsuperscript{(12)}.

A research demonstrated that there is a significant and important relationship between mindfulness exercises and level of consciousness, medical and psychological symptoms and overall well-being based on a mindfulness-based treatment. In addition, a research on randomized clinical trial indicated that mindfulness-based meditation decreases symptoms of depression among women with Fibromyalgia\textsuperscript{(13)}. Carlson and Specs indicated that mindfulness-based meditation significantly increased mental clarity and mental health and decreased physical tensions in patients. The researchers came to conclusion that mindfulness-based cognitive therapy plays an important role in improvement of patients and has a positive impact on health plan\textsuperscript{(14)}.

Mindfulness-based cognitive therapy in group leads to creation of mindfulness through meditation exercises. Moreover, mindfulness results in increase in ability of awareness and self-acceptance among patients. Mindfulness is not a method or technique but it is an available way to reduce suffering and extend the positive qualities such as intelligence, insight, wisdom and compassion. Therefore, it seems that psychological interventions such as mindfulness-based cognitive therapy can improve the mental health of pregnant women suffering from depression.

The present study has some specific and special limitations. First limitation is small sample size. Although the study’s sample size did not reduce but small sample size of the research was a serious limitation which resulted in lack of exact estimation of effect size of the program. The second limitation was related to self-report research instrument. The third limitation was about lack of control of background and personal factors. It is proposed to conduct semi-treatment programs in order to control the expected impact. In addition, it is proposed to use examples with larger size as same as the actual treatment effect size. It is also proposed to use mindfulness-based cognitive therapy on patients with depression in other hospitals in order to extent the findings of the present research.

References
