



Investigating Cognitive Behavioral Therapy in Decreasing Depression in Women Suffering from Postpartum Depression in an Obstruction Office in Ahvaz, Iran

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Quantitative Study

Abstract

Background: This study was performed to determine the effect of cognitive behavioral therapy (CBT) on decreasing the rate of postpartum depression (PPD) in two women referred to one of the obstruction offices of Ahvaz, Iran. Two women with PPD and their husbands were selected through a clinical diagnostic interview and the Edinburgh Postnatal Depression Scale (EPDS) and based on the study inclusion and exclusion criteria and lectures in health center in Ahvaz.

Methods: This study was a single-subject and non-congruent multiple baseline experimental study. Data analysis was conducted using visual depiction, reliable change index (RCI), and recovery percentage. In this study, two women with PPD underwent CBT and data were collected at baseline, during therapy, and at the one-month follow-up, and they completed the Beck Depression Inventory (BDI-13).

Results: The findings indicated 24.17% and 20.92% recovery percentage in depression in the first and second woman, respectively, as a result of CBT.

Conclusion: The results of the present research illustrate the efficacy of CBT in improving depression in women with PPD.

Keywords: Cognitive behavioral therapy, Postpartum depression. Women

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Introduction

Parturition is a natural phenomenon and in the

absence of any unexpected event, it will pose no threat to the mother and fetus and will take place without any complications. Sometimes, parturition is accompanied with complexities and difficulties which can affect the mother and fetus's life and endanger their life. The parturition mechanism is difficult in humans

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due to increment in brain size and shape of the pelvis. These factors create problems in the case of mismatches between the size of the embryo's skull and mother's pelvic outlet (Scott, Gibbs, Karlan, & Haney 2009).

Parturition is sometimes accompanied by a mood disorder which results in feelings of disappointment, incompetency, sin, fear, and worthlessness. These disorders can be the result of pregnancy period stresses or continuation of prenatal depression, sudden hormonal imbalance, physiological changes, and mental problems related to the pregnancy and parturition period (Kani Ahmadi Golzar, 2012). The symptoms of postpartum depression (PPD) persist for at least for 2 weeks and often occur 4 or 6 weeks after birth; in addition, it continues until 3 months after parturition in 50% of cases (Cooper, Champbell, Day, Kennerley, & Bond, 1988; Cox, Murray, & Chapman, 1993). PPD has a significant negative effect on all dimensions of quality of life (QOL) of the mother (Wewerinke, Honig, Heres, & Wennink, 2006; Posmontier, 2008). Interpersonal psychotherapy (IPT) and cognitive behavioral therapy (CBT) are among the treatments used for women suffering from PPD; however, there is much discussion regarding the best therapy approach. The highest therapeutic efficacy has been observed in psychological treatments (Cuijpers, Brannmark, & Van Straten, 2008) and an average amount of efficacy in pharmaceutical treatments (Bledsoe & Grote, 2006). CBT includes a series of psychotherapy interventions with the aim to decrease the level of mental problems. Moreover, it has been more effective than any other psychological intervention (Beck, 2001).

Previous researches on the prevalence of PPD have concentrated on the level and severity of depression semiology (Ohara, 1982; Paykel, 1980; quoted by Rajabi & Khoda Rahimi, 2000) rather than its diagnostic evaluation, although depression semiology is important for diagnosis in this period.

However, the research results were based on signs which may have been misleading. To treat PPD, most often anti-depression drugs are used, but studies have indicated that patients undergoing pharmacotherapy have a two times greater risk of disorder recurrence compared to those undergoing cognitive therapy (Kani Ahmadi Golzar, 2012). PPD is a multifactorial disorder; therefore, the possibility of PPD can be decreased and women's mental health can be increased through identifying and decreasing each of these factors. Due to the sensitivity of this period and the higher risk of depression during this period, this research was conducted to investigate that the efficacy of CBT on the elimination of the symptoms of PPD among women referred to the Midwifery offices in Ahvaz, Iran.

Methods

This non-congruent multiple baseline experiment was performed with a single-subject design. In this kind of study design, the experimental condition is controlled carefully and the independent variable is applied for a regular basis. This design makes possible the comparison of symptoms improvement level during the study period among the subjects, and after the intervention and at baseline. Single-subject experimental designs are similar to group designs and investigate the effect of an intervention by comparing different given conditions of the subject. The performance of subjects is used in the pre-intervention stage or baseline stage in order to predict subject behavior in the future (Kim & Lee, 2003; quoted by Imani, 2012).

The multiple baseline design of CBT was as follows. At the first stage, the baseline of the first couple was performed for 2 weeks. At the next stage, intervention therapy was undertaken continuously. Moreover, composition of the baseline behavior for the second couple was conducted for 3 weeks, then, the treatment was undertaken continuously. CBT was implemented in 10 sessions lasting 1.5 hours twice a week (Table 1).

Table 1. The multiple baseline design of cognitive behavioral therapy for two couples

First Couple	Baseline	Baseline	Intervention	Intervention	Intervention	Intervention	Tracking	
Second Couple	Baseline	Baseline	Baseline	Intervention	Intervention	Intervention	Intervention	One-month tracking

In addition, the Marital Satisfaction Scale (MSS) and Beck Depression Inventory (BDI-13) (short-form) were completed by the couples in the second, fifth, eighth, and tenth sessions and one-month follow-up was conducted. The study population included all women suffering from PPD referred to a midwifery office in Ahvaz in 2014. Two individuals were chosen through purposive sampling and a clinical interview by a clinical psychologist with ≥ 12 cut-off points in the Edinburgh Postnatal Depression Scale (EPDS) and considering the study inclusion and exclusion criteria. Both participants and their husbands provided informed consent to take part in the study. Cox et al. (1993) reported 0.78 as the characteristic score and 0.73 as the positive predictable value for the EPDS in a sample of adult mothers using 12.13 cut-off points and 0.86 sensitivity. The reliability of this scale has been determined to be 0.92 using Cronbach's alpha and 0.8 using test-retest method. Its characteristic score has been reported at 0.96 and its sensitivity as 100%

(Montazeri, Torkan, & Omidvari, 2007). Furthermore, Cronbach's alpha of the BDI-13 was acceptable (0.81) in the whole sample and its simultaneous validity coefficient with Minnesota Multiphasic Personality Inventory (MMPI-D) on 50 people is 0.57 and significant ($P < 0.001$).

Results

As can be seen in table 2, the depression level in the two women decreased from the baseline stage to the stage before CBT. The level of depression improvement was 24.17% at the end of the treatment stage of the first woman and 24.36% at the tracking stage. Moreover, it was 20.92% at the end of the treatment stage of the first woman and 20.87% at the tracking stage. These results indicate that CBT was more effective on decreasing depression in the first woman compared to the second woman, i.e., this treatment was more effective on the first woman than the second woman (24.17%).

Table 2. Depression level changes in the first and second woman during the treatment

Dependent variable	Depression level	
	First woman	Second woman
Woman		
Treatment stages		
First baseline	25	25
Second Baseline	25	24
Third baseline	-	25
Baseline stage mean	25	24.66
Second session	24	23
Fifth session	22	21
Eight session	19	18
Tenth session	17	16
Treatment stage mean	20.5	19.5
Reliable change indicator	30.4	3.26
Depression improvement level	24.17	20.92
Total improvement level after treatment		22.54
One-month follow-up	16	18
Depression improvement level (follow-up)	24.36	20.87
Reliable change indicator	6.08	5.37
Total improvement level after follow-up		22.61

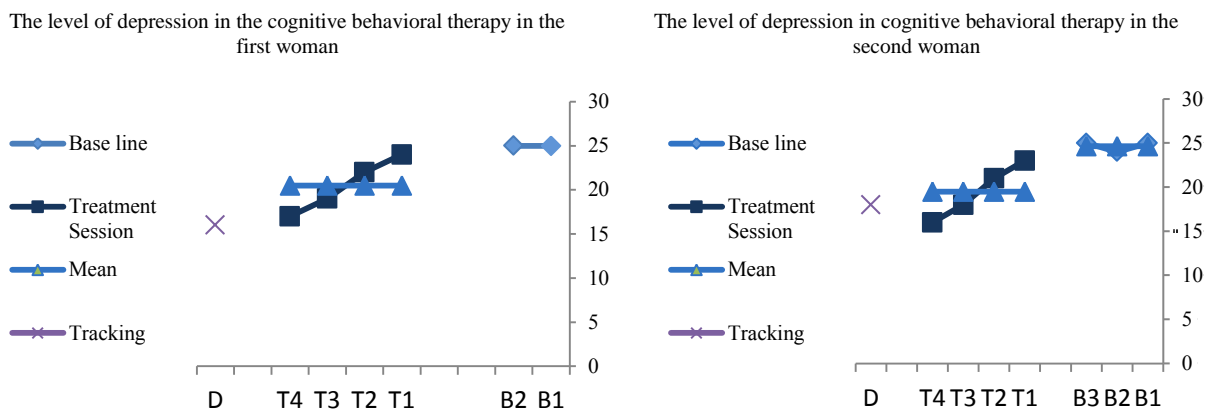


Figure 1. The changes in cognitive behavioral therapy scores of depression level in women at baseline (B), treatment (T), and follow-up stages (D)

In figure 1, the rate of depression in the first and second women decreased from the baseline stage to the post CBT stage. The findings indicate that CBT had a greater effect on reducing depression in the first woman than in the second woman. The total level of depression improvement after the treatment (22.54%) indicates the effectiveness of this treatment on improvement of depression among women. Moreover, in the 1-month follow-up phase, the two women were in the same range of interventions. Furthermore, reliable change index (RCI) after the treatment stage were significant in the first (3.04) and second (3.26) woman (more than $z = 1.96$). RCI was 6.08 in the first woman and 5.37 in the second woman at the one-month follow-up which are significant. However, according to the total level of depression improvement in both women during CBT, it can be said that this treatment was successful based on the Blanchard classification (Poppen, 1989; quoted by Hamidpour, 2008). The depression improvement level of this treatment was 22.61% in the follow-up stage; thus, it can be said that the effect of the therapy persisted.

Discussion

The aim of this research was to investigate the efficiency of CBT in decreasing PPD in women. The findings indicate that in the two women suffering from PPD, changes were observed in the depression dependent

variable. In relation to the use of CBT for the treatment of depression, it can be said that depression level in the first and second woman decreased in the post-treatment stage compared to the baseline stage. The level of depression improvement was 24.17% at the end of the treatment stage in the first woman and second women 20/92 which indicates that CBT decreased the depression level in the first woman more than the second woman. The total level of improvement in depression after the treatment (22.54%) indicates the effectiveness of this treatment on women. The results of this research are similar to that of the study by Rajabi, Karjo-Kasmaie, and Jabbari (2011), Thomas et al. (2012), and Leichsenring, Hiller, Weissberg, and Leibing (2006). In explaining the above findings, it can be said that the cognitive vulnerability assumption is based on individuals' ability to understand, interpret, or evaluate occurrences and conditions that result in denying negative or stressful mental occurrences; however, this may exacerbate the depression symptoms (Metalsky, Halberstadt & Abramson, 1987; quoted by Rajabi & Khoda Rahimi, 2000). Chabrol et al. (2002) presented the prevention and treatment combined approach for the treatment of women with PPD using the EPDS; in addition, they reported that cognitive-behavioral consultation resulted in a significant improvement of depression symptoms in comparison to the control group.

A limitation of this research was its small sample size; therefore, result generalization should be done cautiously. Moreover, it is recommended that several psychologists provide the treatments in future researches since this will result in higher trust in the results and prevent bias. Considering the importance of the treatment of PPD, more extensive research should be carried out in this field and the risk factors of PPD should be examined closely in appropriate cultural and social environments to ensure that appropriate programs are designed to prevent this health problem.

Conflict of Interests

Authors have no conflict of interests.

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