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Caser Report

# The effectiveness of integrating cognitive-behavioral therapy and mindfulness-based cognitive therapy on major depressive disorder and suicidal thoughts: A case report with six-month follow-up

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**Abstract**

The present study aimed to examine the effectiveness of integrating cognitive-behavioral therapy (CBT) and mindfulness-based cognitive therapy (MBCT) on major depressive disorder and suicidal thoughts in a depressive case suffering from suicidal thoughts. This research was an experimental single-case study with a before-and-after design and six-month follow-up. Data were collected using a clinical interview, the Beck Depressive Inventory, and the Beck Scale for Suicidal Ideation. Results indicated the effectiveness of the intervention in decreasing the symptoms of depression and suicidal thoughts, with 64% and 67% improvements in depression and suicidal thoughts, respectively. These effects were maintained during the follow-up period.

## Introduction

Results of epidemiological studies report depression as the most common psychiatric disorder (1). Depressive disorders are a group of disorders with major depression as the main illness. If left untreated, depression can become chronic. Suicide is the most disastrous consequence of depression and is probable at any time during the course of the disease (1). Consequently, depression and its treatment are still a major topic in research.

Based on experimental evidence, cognitive-behavioral models are among the best treatment methods for depression. Nevertheless, these models have so far proved unsuccessful in the definitive treatment of the disease or prevention of its relapse (2). Accordingly, the most recent developments have introduced mindfulness-based cognitive therapy (MBCT) for treating depression (3). Therefore, the present study aimed to examine the effectiveness of integrating cognitive-behavioral therapy (CBT) and MBCT in reducing depression and suicidal tendencies.

## Case Report

The present study utilized a before-and-after single-case design. A woman suffering from major depression who visited the Counseling Center of the University of Gramian-Iraq was selected, and the diagnosis of her illness was confirmed by a psychiatrist. Then, to comply with ethical principles, the patient was informed of the study. In determining the subject's baseline, the case received no intervention for 4 weeks and only completed the questionnaires. Afterward, she received a CBT-MBCT integrative therapy for 8 weeks. One month after the end of the therapy, the questionnaires were completed as a follow-up over 6 consecutive months.

We used a modified version of MBCT, in which some CBT techniques targeting suicide (4) are added to the classic model of cognitive therapy.

The case was a 23-year-old woman, a senior student, and an only child, who lived with her parents.

Previously, she used to have a history of major depression and took citalopram and alprazolam (100 mg). No immediate family members suffered from major depression. However, her mother showed signs of dysthymia. The first period of depression had occurred prior to pre-university final examinations, disrupting her academic performance. She visited the therapist because of suicidal thoughts which, according to her, had been intensified in the weeks prior to her visit.

For data collection, we employed the Beck Depressive Inventory (BDI) which has an acceptable reliability and validity as reported by numerous studies (5), as well as the Beck Scale for Suicidal Ideation (BSSI) which has an interclass correlation of 0.89 and an inter-rater reliability of 0.83 (6). In the present study, the correlation between this scale and the items on suicidal thoughts in BDI was 0.57 on average.

We also conducted a clinical interview according to the diagnostic criteria in DSM-V, and used diagram and graphic analysis for analyzing the data. Moreover, we utilized the formula and the reliable change index (RCI) to calculate changes in improvement percentage.

The changes in the case's scores on BDI and BSSI, as well as in the improvement percentage and RCI indicated that, based on BDI, the case experienced

"severe depression" at the baseline. Her depression was alleviated in the process of therapy, and she experienced "minimal depression" in the last therapy session (Table 1).

In the last follow-up session, she had a depression score of 11, indicating a 64% improvement.

Furthermore, her score on the BSSI (15.5) showed a 67% improvement.

According to the results of graphic analysis, the case's depression and suicidal thoughts demonstrated a decreasing trend at the end of therapy and follow-up sessions (Figure 1).

**Table 1**. The case's scores on BDI and BSSI from the baseline up to six months after the therapy (follow-up)

| Variables | Sessions | | | | | | | | | | | | | | | | | | Improvement percentage | RCI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Baseline | | | | Intervention (Position B) | | | | | | | | Follow-up | | | | | | | |
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 1st | 2nd | 3rd | 4th | 5th | 6th | | |
| Depression | 35 | 32 | 34 | 33 | 31 | 23 | 18 | 17 | 20 | 20 | 14 | 12 | 15 | 13 | 11 | 12 | 10 | 11 | 64% | 4.89 |
| Suicidal thoughts | 15 | 18 | 12 | 17 | 17 | 13 | 12 | 9 | 11 | 10 | 8 | 4 | 5 | 3 | 2 | 3 | 2 | 2 | 67% | 8.60 |

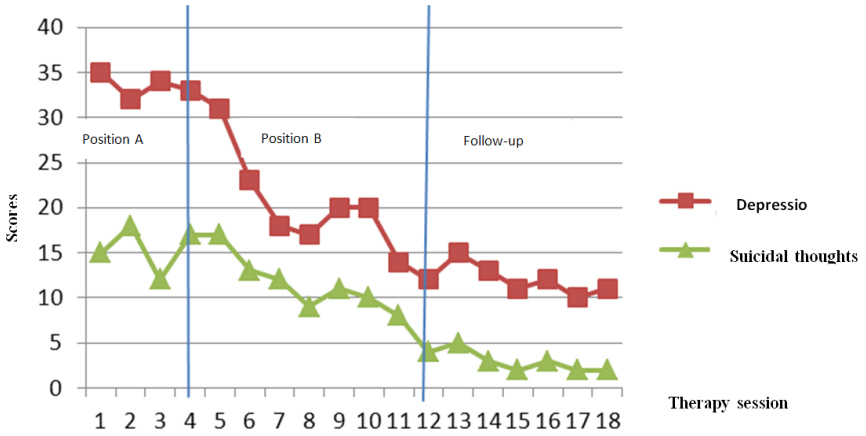


**Figure 1.** The case's scores on BDI and BSSI at the baseline, intervention, and follow-up

For a more accurate determination of intervention results, we also employed the "clinical significance of changes" approach according to Jacobson and Truax. The RCI for both tests was over 1.96 (4.89 and 8.60). Thus, we conclude that this index is significant, and we can ascertain the non-randomness of results. Furthermore, according to the percent agreement between the results of the screening and a more precise test (i.e. interviewing the psychiatrist), the patient is "improved" in terms of the depression variable and the observed clinical changes are significant.

In addition, as the cut-off point is 3 for suicidal thoughts (7) and the case's score is ≤3 in Position B and the follow-up sessions, she is in the normal range in terms of suicidal thoughts.

## Discussion

According to the results of the present study, the CBT-MBCT integrated therapy has decreased the severity of depression and suicidal thoughts in the case, and these results were maintained in the six-month follow-up. As the model used in this study can control the effect of time, this improvement is the result of the intervention.

A review of similar studies generally confirms the results of the present study (8). Mindfulness is basically a method for controlling attention. Since depressive patients focus on negative thoughts and have problems in controlling their attention (9), this method proved successful in decreasing the symptoms of depression. In addition, the results of the present study revealed the maintenance of improvement in the six-month follow-up, in line with previous studies (1). It appears that this intervention has managed to prevent the deterioration of mood and enhance the preventive dimension of therapy by altering negative thought patterns and teaching the skill of attention control.

The limitations of the model used in the present study limit the generalization of the results. Therefore, we recommend the selection of precise experimental designs for a more accurate examination of the effectiveness of this combined therapy.

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