Mindfulness-Based Cognitive Therapy for Bipolar Disorder: Effects on Cognitive Functioning

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BACKGROUND

- Individuals with bipolar disorder have persistent cognitive impairments even when they are not depressed or manic. This includes difficulties in executive functioning, attention and memory (Goldberg & Burdick, 2008) and adversely affects psychosocial functioning.
- We evaluated changes in cognitive functioning by treatment with Mindfulness-Based Cognitive Therapy (MBCT) for bipolar disorder.

Hypotheses:

- Executive functioning will improve from pre- to post-treatment with MBCT.
- Improvements in executive functioning will be associated with increases in mindfulness, decreases in depressive symptoms, and decreases in ruminative response styles.

METHOD

- Study participants: 8 adults who met DSM-IV criteria for bipolar I disorder (n=6, 4 females) or bipolar II disorder (n=2, both females) recruited through the Bipolar Clinic and Research Program at the Massachusetts General Hospital (MGH).

Inclusion Criteria

- Residual depressive symptoms ≥ 3 days every week within the preceding month
- YMRS score < 8

Treatment

- MBCT consisted of 12, 120-minute group treatment sessions conducted weekly over three months. We included mindful movement exercises, short mindfulness exercises, mindfulness to routine activities, short breathing spaces, and loving kindness meditations (Deckersbach et al., in press).

Assessments

- Pre-treatment (Week 0), Post-treatment (Week 12), Follow-Up (Week 48)

Instruments

- Frontal Systems Behavior Scale (FrSBe)
- Young Mania Rating Scale (YMRS; mean = 6.25, SD = 5.37)
- Hamilton Depression Scale (HAM-D; mean = 12.38, SD = 7.87)

RESULTS

Functioning (Table 1)

- Repeated measures ANOVAs indicated significant improvements from pre-tx to post-tx in cognitive functioning, particularly executive functioning and memory, with improvements in executive functioning persisting at follow-up (see Table 1).
- These improvements were consistent with a large effect size (Cohen’s d ≥ 0.8)

Correlates of Improvement in Cognitive Functioning

- Increases in the nonjudgmental subscale of the FFMQ were associated with improvements in:
  - Executive functioning (r = .79, p < .05)
  - Behavioral regulation (r = .88, p < .01)
  - Disinhibition (r = .83, p < .01)
- Decreases in depressive symptoms were related to decreases in apathy (r = .75, p < .05).
- Changes in rumination were not correlated with improvements in cognitive functioning (rs < .40, ps > .33)
- These findings did not remain significant after applying a Bonferroni correction.

DISCUSSION

- MBCT may be effective in improving executive functioning and memory in individuals with bipolar disorder with residual symptoms.
- More intensive follow-up care may be required in order for patients to maintain improvements made in cognitive functioning during treatment.
- Future research should evaluate MBCT in a randomized, controlled trial to determine its relative effectiveness in improving cognitive functioning.

REFERENCES


Table 1: Cognitive Functioning at Pre-Treatment, Post-Treatment and Follow-Up Assessments

<table>
<thead>
<tr>
<th></th>
<th>Pre-Treatment</th>
<th>Post-Treatment</th>
<th>Follow-Up</th>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
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<tr>
<td></td>
<td>Pre-Tx</td>
<td>Post-Tx</td>
<td>Follow-Up</td>
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<td>67.38</td>
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<td>60.63</td>
<td>18.94</td>
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<tr>
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<td>Nonexecutive</td>
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<tr>
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<td>11.47</td>
<td>50.88</td>
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</tbody>
</table>

**p < .05, \(\star\) p < .01 for repeated measures analysis of variance (ANOVA) with time (pre-treatment, post-treatment and follow-up) as the within subjects factor.

Figure 1. Changes in cognitive functioning on FrSBe across treatment. Higher scores indicate greater impairment in cognitive functioning.