

Critical Appraisal Form-Quantitative Study

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Study Level of Evidence, What Type of Study?

Level I: RCT

Level II: Cohort trial Case-control trial Non-randomized control trial

Level III: Case-control no pre-post test

Level IV: Single case study Case series No comparison group

Level V: Descriptive study Narrative review Expert opinion

Purpose of Study: Is purpose clear? yes no

Describe researchers question/purpose:

The purpose of this study was to assess changes in self-reported cognitive functioning in patients with bipolar disorder who participated in an open pilot trial of mindfulness-based cognitive therapy (MBCT). This article is a secondary analysis of data from a study on MBCT and cognitive functioning. This analysis includes the effects of MBCT on cognitive functioning and if this function improves is there an association with an increase in mindfulness and decrease in mood symptoms as the result of MBCT.

METHODS

Were there any biases or ethical concerns in the study design?

There was evidence of biases in this study due to a small sample size and use of self report questionnaire measures of cognitive functioning which may not have shown their true functioning level.

POPULATION

Who was the sample, how many subjects?

- N=12 adults recruited, 10 initially, 1 dropped-out, 1 excluded because of incomplete test results
- M age= 42
- M education= 16 yrs
- Bipolar I or Bipolar II diagnosis

Inclusion Criteria

- Bipolar I or II disorder
- Residual depressive symptoms, defined as feeling depressed or experiencing decreased interest at least 3 days every week during the month prior to the study, but no more than three associated symptoms on the MINI
- Few residual symptoms of mania, as determined by a score on the Young Mania Rating Scale (YMRS) of less than 8
- Had not had an episode of major depression and/or hypomania or mania in the month prior to the screening
- Taking a stable dose of psychiatric medication

Exclusion Criteria:

Exclusion criteria were

- Schizophrenia, schizoaffective disorder, delusional disorder, psychotic disorders not otherwise specified, major depressive disorder, or mood congruent, or congruent psychotic features
- Substance dependence disorders, including alcohol dependence, currently or within the previous 12 months
- Untreated hypothyroidism
- Unsafe suicidal ideation, plan, and intent
- Having received electroconvulsive therapy within the 6 months preceding study enrollment
- Current neurologic conditions as well as any medical conditions affecting the patient's ability to participate in treatment.

What was the intervention? Frequency, setting?

After the initial screening, participants completed a baseline assessment that included measures of mindfulness, depression, mania, and cognitive functioning. The intervention involved 12 weekly 2-hour group sessions. Session content included cognitive behavioral therapy, mindfulness meditation, psychoeducation about bipolar disorder, mood monitoring, problem solving, and mindful body movements. In addition to immediate post-intervention assessments a 3-month follow-up assessment was administered.

Relevant outcomes to OT?

- Mindfulness
- Depression
- Executive Function
- Executive Function

How measured?

Five Factor Mindfulness Questionnaire
Hamilton Rating Scale for Depression
Frontal Systems Behavior Scale (FrSbe)
Behavior Rating Inventory of Executive Function (BRIEF)

Were the tests valid? Explain

Yes, the tests used have been standardized and shown to assess what they intend to assess.

Were the tests reliable? Explain

The tests used have been previously shown to be reliable assessments.

RESULTS, CONCLUSIONS, CLINICAL IMPLICATIONS:**What were the findings?**

- Improvements on Shift, Plan/Organize, and Task Monitor subscales of BRIEF.
- Apathy and Executive Function subscales of FrSbe significant change across time
- Initiate and Working Memory subscales of BRIEF significant improvement.
- Overall, patients showed significant improvements in executive functioning, memory, and ability to start and complete tasks on the BRIEF and FrSbe. These changes also brought about increases in mindful observance and awareness of thoughts and feelings, but not associated with decreases in depression. After treatment ended, most improvements tended to diminish.

Was there statistically significant change? Yes

- BRIEF for cognitive functioning
- Initiate, Working Memory subscales (BRIEF)
- Apathy and Executive Function subscale (FrSbe)

Clinically significant change? Explain.

- Changes were correlated in mindfulness, depression, and mania, which are important client day to day concerns
- Improvements in awareness and decreases in manic episodes are important clinical results to consider in client functioning
- Improvement in executive functioning, task monitoring, and memory add to the importance of clinical findings
- Increases in mindfulness were shown which may be a mechanism for improvement in cognitive functioning
- Awareness of one's bodily sensations make people cognizant of their mood and other bodily needs, therefore needs are less likely to go unmet
- Memory, the ability to plan, organize, and initiate tasks was also impacted as well as emotional regulation
- Habituation may result by increasing awareness and tolerance to negative emotional states. This resulted in less time dwelling on them in the future.

What did the author conclude?

The author concluded that mindfulness-based cognitive therapy (MBCT) is an effective treatment option that can be used in addition to medication, to improve cognitive

functioning in those with bipolar disorder. However, future randomized controlled trials should be done for comparison of the effectiveness of MBCT in improving cognitive function.

My Brief Summary:

What I see as study strengths:

- This study has the potential for repeatability
- Study takes a new approach to mindfulness for various results
- Presents an opportunity for future studies and serves as a platform
- Self-report measures allow open-ended personal freedom for participants which is effective for evaluating subjective experiences and cognitive and executive functioning processes about which people may be self-aware
- The study utilized a sample of bipolar patients with residual mood symptoms, rather than a sample of individuals in a current mood episode

What I see as limitations:

- It is not positive whether MBCT actually improves cognitive functioning more than other treatments would. Researchers should have interpreted the results with more caution and more evidence should be researched.
- Mindfulness treatments were not systematically evaluated, so researchers were unsure of how much practice was actually needed to maintain the benefits of MBCT.
- This study had a rather small sample size, which limits statistical power and forces researchers to generalize. A larger sample size would be more beneficial in yielding more supportive and reliable data.
- Outcome measures consisted of cognitive functioning self-report, which may not be indicative of the participants actual functioning.
- The study used a sample of patients with bipolar disorder with residual mood symptoms instead of using a sample of patients with a current mood episode. This could have potentially contributed to skewed results.

How is the study's findings relevant to OT?

Mindfulness-based cognitive therapy used with individuals with bipolar disorder showed improvement in executive functioning, memory, and decreasing apathy. Executive function outcomes are relevant to OT in the facilitation of helping clients with Bipolar I and II to improve shift, plan/organize, and task monitoring skills in daily tasks. Working memory outcomes are relevant to OT in assisting clients effective functioning during a task. Finally, decreasing apathy to facilitate participation in daily living is beneficial to OT clients.

Occupational therapists can use this study's results to further promote this intervention strategy with clients who may be diagnosed with bipolar disorder. The study also promotes further future research in the area of study. Through the use of self-report measures, participants have autonomy, which incorporates occupational therapy's value of client-centeredness by use of a subjective approach.

How do I intend to use these results?

These results can be used within the profession of Occupational Therapy, because with future studies to back it up, therapists can use this alternative method to treat patients with bipolar I and II. It is a client-centered and holistic approach that goes along with the centennial vision of the AOTA.