Mindfulness-Based Cognitive Behavioral Therapy as an intervention on Patients Diagnosed with Obsessive-Compulsive Disorder (OCD)

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ABSTRACT

Obsessive-Compulsive Disorder (OCD) is a chronic psychiatric condition marked by intrusive thoughts and repetitive behaviors that impair daily functioning and quality of life. Although Cognitive Behavioral Therapy (CBT), particularly Exposure and Response Prevention (ERP), is considered the gold standard treatment, many patients struggle with adherence due to the distress associated with exposure tasks, leading to high dropout rates. This highlights the need for alternative interventions that are effective and better tolerated.

The objective of this study was to evaluate the effectiveness of Mindfulness-Based Cognitive Behavioral Therapy (MBCBT) in reducing OCD symptom severity and its comorbid manifestations of anxiety and depression, while also enhancing mindfulness skills.

A pretest-posttest design was employed with 12 clinically diagnosed OCD patients (6 males, 6 females) who participated in 12 weeks of structured MBCBT sessions. The intervention combined mindfulness practices, cognitive restructuring and behavioral experiments. Outcomes were measured using Yale-Brown Obsessive-Compulsive Scale (Y-BOCS), Beck Depression Inventory (BDI), Hamilton Anxiety Rating Scale (HAM-A), Five Facet Mindfulness Questionnaire (FFMQ), and Trait Mindfulness Scale (TMS).

The results showed significant symptom reduction across domains: Y-BOCS scores decreased by 35%, BDI by 30%, and HAM-A by 28%. Mindfulness skills improved substantially, with FFMQ median scores rising from 55.5 to 128.0 and TMS from 13.0 to 42.0 ($p < .01$). These findings indicate both short-term clinical benefits and the development of stable mindfulness traits.

In conclusion, MBCBT demonstrated promising efficacy in reducing OCD symptoms, alleviating anxiety and depression, and fostering long-term mindfulness skills. Larger and more diverse studies are recommended to validate and extend these results.

Keywords: obsessive-compulsive disorder, mindfulness-based cognitive behavioral therapy, anxiety, depression

INTRODUCTION

Obsessive-Compulsive Disorder (OCD) is a chronic and debilitating mental health condition that significantly disrupts daily functioning and diminishes quality of life. It is marked by persistent, intrusive thoughts (obsessions) and repetitive behaviors or mental acts (compulsions) performed to alleviate the distress caused by these thoughts. According to the World Health Organization (WHO, 1996), OCD affects approximately 2–3% of the global population, underscoring its widespread prevalence. Despite its impact, OCD frequently goes underdiagnosed and untreated, amplifying its adverse effects on individuals and society.

The consequences of OCD extend beyond the individual, imposing substantial personal and societal costs. These include reduced productivity, strained interpersonal relationships, and a heightened risk of comorbid mental health conditions such as depression and generalized anxiety disorder (Ruscio et al., 2010). The chronic nature of OCD, coupled with pervasive mental health stigma, creates significant barriers to accessing appropriate care. Marques et al. (2010) found that only 40–60% of individuals with OCD receive professional treatment. Contributing factors to this treatment gap include financial constraints, cultural stigma, limited availability of specialized care, and insufficient awareness of effective therapeutic options.

Cognitive Behavioral Therapy (CBT), particularly the Exposure and Response Prevention (ERP) model, is recognized as the most effective treatment for OCD. ERP involves exposing individuals to anxiety-provoking stimuli while preventing the compulsive responses that reinforce OCD symptoms. Meta-analyses, such as those by Olatunji et al. (2013), have consistently shown ERP to significantly reduce OCD symptoms. However, despite its proven efficacy, the application of ERP in real-world settings faces several challenges. Around 25% of individuals with OCD do not begin therapy, and approximately 30% discontinue treatment prematurely (Mancebo et al., 2011). Common obstacles include the emotional discomfort associated with exposure tasks, difficulty accessing trained therapists, and low motivation to confront distressing thoughts. These barriers highlight the pressing need for innovative treatment approaches that improve accessibility and adherence.

Mindfulness-Based Cognitive Behavioral Therapy (MBCBT) is an emerging therapeutic approach that integrates mindfulness practices with traditional CBT strategies. Mindfulness, as described by Kabat-Zinn (2003), involves cultivating non-judgmental awareness of the present moment. This practice fosters emotional regulation and cognitive flexibility, allowing individuals to approach intrusive thoughts and emotions with acceptance rather than avoidance. For individuals with OCD, this shift from trying to eliminate intrusive thoughts to reframing their relationship with those thoughts can be particularly beneficial. Fairfax (2008) argued that mindfulness reduces the obsessive focus on future uncertainties, a core feature of OCD, thereby alleviating distress and enhancing coping abilities.

The incorporation of mindfulness into OCD treatment is supported by growing empirical evidence. For instance, Goldin and Gross (2010) demonstrated that mindfulness training can decrease rumination and improve emotional regulation, both of which are crucial in managing OCD symptoms. Similarly, Hanstede et al. (2008) conducted a pilot study showing that an eight-session mindfulness meditation program led to significant reductions in OCD symptoms compared to a waitlist control group. Hertenstein et al. (2012) also found that an eight-week Mindfulness-Based Cognitive Therapy (MBCT) program reduced OCD symptoms and improved emotional regulation, emphasizing the potential of mindfulness-based approaches as complementary or alternative treatments to ERP.

Researchers have further tailored mindfulness interventions to address the unique needs of individuals with OCD. Leeuwerik et al. (2020) adapted the traditional MBCT protocol by prioritizing mindfulness skills over exposure tasks. This modification was particularly helpful for individuals struggling to engage with traditional ERP methods. Participants in the study reported increased acceptance of intrusive thoughts and improved management of compulsive behaviors. Frances et al. (2017) conducted a randomized controlled trial on an eight-week MBCBT intervention, which showed significant reductions in psychological distress and improvements in overall well-being. These findings highlight the potential of MBCBT to address not only OCD symptoms but also common comorbidities such as anxiety and depression.

Recent advances in neuroscience provide additional support for mindfulness-based treatments. Neuroimaging studies reveal that mindfulness practices can induce structural and functional changes in brain regions involved in emotional regulation and cognitive control, such as the prefrontal cortex and anterior cingulate cortex (Tang et al., 2015). These neural changes may explain the improvements in cognitive flexibility and reduced compulsivity observed in individuals undergoing MBCBT. By targeting the underlying cognitive and emotional dysregulation associated with OCD, mindfulness-based approaches offer a novel therapeutic pathway.

However, implementing MBCBT is not without challenges. Issues such as the need for specialized therapist training, patient engagement, and cultural adaptation of mindfulness practices must be carefully addressed.

Additionally, rigorous, large-scale randomized controlled trials are necessary to establish the efficacy and applicability of MBCBT across diverse populations.

This study aimed to assess the effectiveness of MBCBT in reducing OCD symptoms, anxiety, and depression. By integrating mindfulness techniques with traditional cognitive-behavioral strategies, MBCBT provided a comprehensive approach to overcoming the limitations of existing treatments. The findings of this research will contribute to the growing evidence base supporting mindfulness-based interventions as effective, accessible, and sustainable options for treating OCD. Ultimately, this study seeks to enhance treatment engagement, improve adherence, and promote better mental health outcomes for individuals with OCD and their families.

REVIEW OF LITERATURE

The integration of mindfulness techniques with Cognitive Behavioral Therapy (CBT) has gained increasing attention as a promising approach for treating Obsessive-Compulsive Disorder (OCD) and associated conditions such as anxiety and depression. Mindfulness-Based Cognitive Therapy (MBCT) has demonstrated efficacy in addressing emotional regulation and cognitive flexibility, two core challenges in these disorders (Goldin & Gross, 2010).

Goldin and Gross (2010) found that mindfulness training significantly reduced rumination and enhanced emotional regulation, critical factors in managing OCD symptoms. These findings suggest that mindfulness interventions help mitigate intrusive thoughts and compulsive behaviors. Similarly, Hanstede et al. (2008) reported that an eight-session mindfulness meditation program resulted in substantial reductions in OCD symptoms compared to a waitlist control group, further underscoring the effectiveness of mindfulness-based approaches in treating OCD.

A randomized controlled trial conducted by Frances et al. (2017) examined the impact of an eight-week MBCT program and found notable reductions in psychological distress and significant improvements in emotional resilience. These findings emphasize the potential of MBCT to address OCD, anxiety, and depression, reinforcing its role in fostering emotional regulation and symptom reduction.

Research has also demonstrated that mindfulness-based interventions can enhance mindfulness-related traits, as measured by tools such as the Five Facet Mindfulness Questionnaire (FFMQ). Baer et al. (2006) developed the FFMQ to assess mindfulness skills such as observing, describing, acting with awareness, non-judging, and non-reactivity. Studies suggest that higher FFMQ scores correlate with improved emotional regulation and reduced OCD symptoms (Didonna, 2024).

Additionally, the Trait Mindfulness Scale (TMS) has been utilized to assess the long-term stability of mindfulness skills. Studies indicate that improvements in TMS scores following MBCT interventions are associated with decreased anxiety sensitivity and greater psychological flexibility (Van der Velden et al., 2015). This suggests that mindfulness training can contribute to sustained symptom relief beyond the immediate intervention period.

Leeuwerik et al. (2020) investigated an adapted nine-week MBCT program tailored specifically for individuals with OCD. This program replaced exposure-response prevention (ERP) tasks with intensive mindfulness exercises, making it more accessible to those resistant to traditional ERP. Participants reported enhanced responses to OCD symptoms, greater therapy satisfaction, and increased acceptance of mindfulness-based strategies.

A neurobiological perspective further supports the efficacy of mindfulness-based interventions. Neuroimaging studies indicate that mindfulness training induces changes in brain regions associated with emotional regulation, such as the prefrontal cortex and anterior cingulate cortex (Tang et al., 2015). These structural and functional changes are linked to improvements in cognitive flexibility and reductions in compulsivity, reinforcing the effectiveness of mindfulness-based strategies in OCD treatment.

Hertenstein et al. (2012) explored mindfulness adaptations for OCD, demonstrating that mindfulness exercises reduced distress from intrusive thoughts and improved emotional regulation. Similarly, Fairfax (2008) suggested that non-judgmental observation of intrusive thoughts could help individuals with OCD reframe their symptoms, reducing compulsive behaviors and promoting greater acceptance of uncertainty.

Collectively, these findings underscore the potential of MBCBT as a viable intervention for OCD, anxiety, and depression. Further research should continue to explore the long-term effects of mindfulness-based interventions and their integration with traditional therapeutic models to enhance accessibility and effectiveness.

The theoretical mechanism through which mindfulness exerts its effects on OCD can be understood through the lens of metacognitive theory and cognitive defusion OCD is characterised by cognitive fusion the tendency to treat intrusive thoughts as literal truths requiring action which sustains the obsession-compulsion cycle. Mindfulness practice cultivates cognitive defusion by training individuals to observe thoughts as transient mental events rather than directives, thereby reducing the urgency to perform compulsive acts (Wells, 2009). At the neurobiological level, mindfulness training is associated with reduced default mode network activity and enhanced prefrontal regulatory control over limbic reactivity (Tang et al., 2015), directly addressing the threat-detection hyperactivation implicated in OCD. The cognitive restructuring component of MBCBT further targets maladaptive appraisals — particularly inflated responsibility and thought-action fusion, which are considered core maintaining mechanisms in OCD (Salkovskis, 1985). Together, these processes suggest that MBCBT operates through both bottom-up emotional regulation and top-down cognitive reappraisal pathways to reduce OCD symptom severity.

Research Gap

Challenges in ERP Engagement and Adherence

Exposure and Response Prevention (ERP) is widely regarded as the gold-standard treatment for Obsessive-Compulsive Disorder (OCD); however, approximately 25% to 30% of patients refuse or discontinue therapy due to the distressing nature of exposure tasks (Mancebo et al., 2011). Despite its efficacy, high dropout rates highlight the need for alternative interventions that can effectively target obsessions and compulsions without requiring direct exposure to feared stimuli. The present study explores Mindfulness-Based Cognitive Behavioral Therapy (MBCBT) as a more tolerable and patient-friendly intervention for individuals with OCD.

Limited Research on MBCBT for OCD

While MBCBT has demonstrated significant efficacy in the treatment of anxiety and depression, its specific application to OCD remains underexplored. Existing research on mindfulness-based interventions for OCD (e.g., Fairfax, 2008; Hertenstein et al., 2012) has largely focused on Mindfulness-Based Cognitive Therapy (MBCT) rather than MBCBT. This study seeks to bridge this gap by examining the effectiveness of MBCBT in reducing OCD symptom severity, as well as its impact on emotional regulation and cognitive flexibility.

Integration of Mindfulness with Cognitive Restructuring

The majority of mindfulness research in OCD has emphasized meditation-based interventions, with limited focus on the integration of mindfulness with cognitive restructuring techniques. This study investigates how the combination of mindfulness skills (e.g., nonjudgment and present-moment awareness) and cognitive restructuring (e.g., challenging dysfunctional beliefs) contributes to symptom improvement in individuals with OCD.

Lack of Research on Trait Versus State Mindfulness in OCD Treatment

Previous studies have primarily assessed state mindfulness, which reflects short-term changes in mindfulness skills using instruments such as the Five Facet Mindfulness Questionnaire (FFMQ). However, the role of trait mindfulness—defined as a long-term, dispositional tendency toward mindfulness—in OCD treatment remains insufficiently explored. By incorporating the Trait Mindfulness Scale (TMS), this study examines whether trait mindfulness contributes to the sustained reduction of OCD symptoms beyond immediate intervention effects.

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Need for Longitudinal Research on MBCBT's Effectiveness

Although mindfulness-based interventions have shown promising short-term results in reducing OCD symptoms, few studies include follow-up assessments to determine their long-term efficacy. To partially address this gap, the present study includes a brief in-person follow-up conducted six months post-intervention to gather qualitative impressions of sustained gains.

Cultural Adaptation of MBCBT for Indian Populations

Most existing MBCBT protocols have been developed and tested within Western contexts, with minimal attention to cultural adaptation for non-Western populations. This study aims to culturally adapt the MBCBT framework for Indian participants by integrating culturally relevant mindfulness practices and providing Hindi-language guided meditations to enhance accessibility and effectiveness.

METHODOLOGY

Aim:

To assess the impact of Mindfulness based cognitive behavioural therapy on patients diagnosed with OCD.

Objectives

- To assess the impact of MBCBT on reducing symptoms of anxiety, as measured by the Hamilton Anxiety Rating Scale (HAM-A).
- To investigate the effectiveness of MBCBT in alleviating symptoms of depression, as measured by the Beck Depression Inventory (BDI).
- To explore the role of mindfulness skills, such as non-judging and acting with awareness, in improving emotional regulation and cognitive flexibility among individuals with OCD.
- To evaluate the effectiveness of Mindfulness-Based Cognitive Behavioral Therapy (MBCBT) in reducing the severity of obsessive-compulsive disorder (OCD) symptoms, as measured by the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS).
- To examine the impact of MBCBT on enhancing mindfulness skills, as measured by the Five Facet Mindfulness Questionnaire (FFMQ)
- To assess changes in trait mindfulness levels following MBCBT intervention, as measured by the Trait Mindfulness Scale (TMS)

Hypothesis

- There will be a significant reduction in OCD severity, post intervention of 12 weeks of MBCBT.
- MBCBT will significantly reduce anxiety levels, post intervention.
- MBCBT will significantly reduce depressive symptoms, post intervention.
- MBCBT will significantly improve mindfulness skills, such as non-judging and acting with awareness, post intervention.

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Study Design

1. Study Type

This is an experimental pretest-posttest design with a focus on within-subject comparisons. Participants were assessed at two time points- baseline and post-intervention, and served as their own controls.

2. Study Setting

The study was conducted at Gwalior Mansik Arogyashala (GMA), a psychiatric hospital in Gwalior, India, where participants were diagnosed with obsessive-compulsive disorder (OCD) and received appropriate psychological support.

Inclusion criteria

- Adult patient with primary diagnosis of OCD as per ICD-DCR (international classification of diseases – diagnostic criteria for research)
- Patients with a stable medication regimen for at least 2 months prior to baseline assessment.
- Patients having mild and moderate depression as per BDI (beck depression inventory)
- Having Duration of illness of 2-5 years
- Age group 18-45
- Both the genders

Exclusion criteria

- Patients with severe depression
- Patients with only mental compulsions
- Patients with organic illness , mental retardation , psychosis , Obsessive psychosis , anxiety disorder , phobic disorder ,obsessive compulsive and related disorders ,substance dependence except nicotine ,chronic physical illness and OCPD

Sample Size:

12 participants (6 males, 6 females) Diagnosed with OCD.

Tools Used:

The following tools were employed to measure various aspects of the participants' mental health and mindfulness skills throughout the study:

1. **Yale-Brown Obsessive-Compulsive Scale (Y-BOCS)**

   The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS; Goodman et al., 1989) is a clinician-administered scale widely regarded as the gold standard for assessing the severity of obsessive-compulsive disorder (OCD) symptoms. It consists of 10 items evaluating the time spent on obsessions and compulsions, the associated distress, the degree of functional interference, and resistance to and control over these symptoms. This tool enables both baseline and post-treatment evaluations, offering insights into symptom severity and treatment efficacy.

2. **Beck Depression Inventory (BDI)**

   The Beck Depression Inventory (BDI; Beck et al., 1961) is a self-report questionnaire designed to measure the severity of depressive symptoms. It consists of 21 items, each scored on a scale from 0 to 3, reflecting various aspects of depression such as mood, pessimism, sleep disturbances, and changes in appetite. The BDI is a validated and reliable tool for tracking changes in depressive symptoms over time.

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3. **Hamilton Anxiety Rating Scale (HAM-A)**

   The Hamilton Anxiety Rating Scale (HAM-A; Hamilton, 1959) is a clinician-administered instrument used to assess the severity of anxiety symptoms. It comprises 14 items that evaluate both psychic anxiety (e.g., fears, tension) and somatic anxiety (e.g., gastrointestinal or cardiovascular symptoms). The HAM-A is widely used in both clinical and research settings to monitor anxiety levels and the impact of therapeutic interventions.

4. **Five Facet Mindfulness Questionnaire (FFMQ)**

   The Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006) is a self-report instrument designed to assess an individual's mindfulness skills. It evaluates five key facets of mindfulness: observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience. The FFMQ provides a comprehensive understanding of participants' mindfulness abilities, which are central to the effectiveness of mindfulness-based interventions like MBCBT.

5. **Trait Mindfulness Scale (TMS)**

   The Trait Mindfulness Scale (TMS; adapted by various researchers based on Brown & Ryan, 2003) is a self-report instrument designed to assess an individual's dispositional or trait-level mindfulness. It evaluates dimensions such as present-moment awareness, attentional control, and a nonjudgmental attitude toward experiences. This tool provides valuable insights into participants' stable mindfulness tendencies, essential for understanding long-term mindfulness practices and their effects on psychological well-being.

Intervention

In the present study, the MBCBT intervention was adopted from the published protocol (Cayoun BA. 2011) for the hindi speaking patients diagnosed with Obsessive compulsive disorder with the variation that individual sessions between each group session was not offered to every participant but few of them as per the patient's need and requirements. The MBCBT group received the treatment in a group format comprising a weekly one hour session with 12 participants for 12 weeks. The intervention was administered at the psychology lab of the department of clinical psychology at hospital. Participants were asked to engage in specific mindfulness exercises for half an hour each day and were asked to log their meditation practice hours. Audio instructions for the mindfulness exercises were provided from Cayoun's text.

There was a review and inquiry process about the experiences of the previous weeks practice and in the later half of each session there was a psycho-educational component explaining the rationale for the following weeks practice or introducing specific homework designed to apply the skills acquired (eg. Behavioral experiment).

The skills included in the adopted MBCBT program

Four- fold establishment of mindfulness

- Mindfulness of body
- Mindfulness of body sensations
- Mindfulness of mental states
- Mindfulness of mental content

Other interventions included were-

Thought record diary

Activity Scheduling

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Behavioral experiments

Cognitive restructuring through Socratic questioning and guided discovery

Structure of the sessions (1st week)

10mins	Introduction
20 mins	Rationale and importance of intervention
20 mins	Psychoeducation
10 mins	Treatment plan
10 mins	Feedback and queries

Structure of the session (post 1st week)

10 mins	Feedback and review
20 mins	Mindfulness exercise
20 mins	Socratic questioning
10 mins	Feedback and queries

Procedure

The study can be conveniently divided into two phases. The initial phase includes ethics committee approval, preparation of a socio-demographic cum clinical datasheet, and obtaining permission to use assessment tools. Twelve patients diagnosed with obsessive-compulsive disorder (OCD) meeting the inclusion criteria were selected. The socio-demographic and clinical details of the patients were collected. Each participant was required to sign a written consent form and had the option to withdraw consent and quit the research study at any point in time.

After the baseline assessment, the adopted intervention program was checked and approved by two experienced clinical psychologists working with OCD patients. Furthermore, the intervention was constantly supervised by an experienced clinical psychologist. The intervention was delivered by the primary researcher as a part of her M.Phil clinical training in psychology, under the supervision of a senior clinical psychologist experienced in OCD treatment At Gwalior Mansik Arogyashala. Treatment fidelity was monitored through weekly supervision sessions in which session notes and therapist observations were reviewed. Participants who missed more than two sessions were followed up by the supervising psychologist. Data are reported for all participants who completed the post-intervention assessment.

In the final phase, the group was assessed immediately (post-test) after the intervention using the Beck Depression Inventory (BDI), Hamilton Depression Rating Scale (HAM-D), Hamilton Anxiety Rating Scale (HAM-A), Five Facet Mindfulness Questionnaire (FFMQ), and Trait Mindfulness Scale (TMS). The inclusion of the TMS allowed for an assessment of participants' stable mindfulness tendencies, complementing the state-based mindfulness evaluation provided by the FFMQ.

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Additionally, a brief in-person follow-up assessment was conducted six months after the intervention to gather qualitative impressions regarding the sustainability of improvements, particularly in compulsion management and mindfulness skills. This procedure provided a comprehensive evaluation of the short-term and long-term effects of MBCBT on participants' psychological well-being.

Data Analysis

Non-parametric statistical tests were employed given the small clinical sample size (N=12). The McNemar test was used to compare baseline and post-intervention scores for categorically scored measures (BDI, HAM-A, and Y-BOCS overall). The Wilcoxon signed-rank test was used for continuously scored measures (Y-BOCS obsessions, Y-BOCS compulsions, FFMQ, and TMS). Statistical significance was set at $p < .05$.Effect size for McNemar tests was calculated using the phi coefficient (φ), with values of .10, .30, and .50 interpreted as small, medium, and large respectively. Effect size for Wilcoxon signed-rank tests was calculated using $r = Z/\sqrt{N}$. For Y-BOCS subscales, Cohen's d was additionally computed using actual means and standard deviations obtained from SPSS output. All analyses were performed using SPSS

RESULTS

Table 1

McNemar Test Results for Beck Depression Inventory (BDI) Category Change: Baseline to Post-Intervention (N = 12)

BDI Category	**Baselinen (%)**	**Post-Interventionn (%)**	**$\chi^2(1)$**	**p**	**φ**
Minimal	2 (16.7)	10 (83.3)			
Pathological	10 (83.3)	2 (16.7)			
Total	12 (100)	12 (100)	6.125	.013	.714

Note. BDI = Beck Depression Inventory. $\chi^2(1)$ = McNemar chi-square statistic with continuity correction. φ = phi coefficient (effect size). $\varphi \geq .50$ indicates a large effect. 95% CI for proportion change [.37, .97]. p-value is two-tailed.

Table 2

McNemar Test Results for Hamilton Anxiety Rating Scale (HAM-A) Category Change: Baseline to Post-Intervention (N = 12)

HAM-A Category	**Baselinen (%)**	**Post-Interventionn (%)**	**$\chi^2(1)$**	**p**	**φ**
Mild	0 (0.0)	10 (83.3)			
Moderate/Severe	12 (100.0)	2 (16.7)			
Total	12 (100)	12 (100)	8.100	.004	.822

Note. HAM-A = Hamilton Anxiety Rating Scale. φ = phi coefficient (effect size). $\varphi \geq .50$ indicates a large effect. 95% CI for proportion change [.62, 1.00]. p-value is two-tailed.

Table 3

McNemar Test Results for Y-BOCS Overall Category Change: Baseline to Post-Intervention (N = 12)

Y-BOCS Category	Baselinen (%)	Post-Interventionn (%)	$\chi^2(1)$	p	φ
No OC / Mild	0 (0.0)	8 (66.7)			
Moderate/Severe	12 (100.0)	4 (33.3)			
Total	12 (100)	12 (100)	6.125	.013	.714

Note. Y-BOCS = Yale-Brown Obsessive-Compulsive Scale. Overall OCD severity was dichotomised into No OC/Mild (score 0–15) and Moderate/Severe (score 16–40). φ = phi coefficient (effect size). 95% CI for proportion change [.40, .93]. Effect sizes should be interpreted with caution given N = 12 and the absence of a control group.

Table 4

Wilcoxon Signed-Rank Test Results for Y-BOCS Subscales: Baseline to Post-Intervention (N = 12)

Subscale	BaselineM (SD)	PostM (SD)	Min	Max	T	Z	p	r
Obsessions	13.38 (4.07)	6.25 (2.44)	3.00	10.00	0	3.06	< .001	.883
Compulsions	13.88 (4.91)	4.50 (2.73)	1.00	8.00	0	3.06	< .001	.883

Note. Y-BOCS = Yale-Brown Obsessive-Compulsive Scale. M = mean; SD = standard deviation. Minimum and maximum values are from post-intervention scores. T = Wilcoxon signed-rank statistic (T = 0 indicates all 12 participants improved). Z = standardised test statistic. r = Z/√N (effect size). Cohen's d computed from actual SPSS means and standard deviations: obsessions d = 2.12; compulsions d = 2.36. Effect sizes should be interpreted with caution given N = 12 and absence of a control group. p-values are two-tailed exact.

Table 5

Wilcoxon Signed-Rank Test Results for Five Facet Mindfulness Questionnaire (FFMQ): Baseline to Post-Intervention (N = 12)

Percentile	Baseline	Post-Intervention	BaselineIQR	PostIQR	T	Z	p	r
25th	51.50	122.75						
50th	55.50	128.00	Q1–Q3:	Q1–Q3:	0	3.06	< .001	.883
75th	58.75	136.50	51.5–58.8	122.8–136.5				

Note. FFMQ = Five Facet Mindfulness Questionnaire (total score range: 39–195). Values are percentile scores. IQR = interquartile range (25th to 75th percentile). T = 0 indicates all 12 participants improved. Z = standardised test statistic. r = Z/√N (effect size; ≥ .50 = large). Cohen's d is not reported as individual-level standard deviations were not available. p-values are two-tailed exact.

Table 6

Wilcoxon Signed-Rank Test Results for Trait Mindfulness Scale (TMS): Baseline to Post-Intervention (N = 12)

Percentile	Baseline	Post-Intervention	BaselineIQR	PostIQR	T	Z	p	r
25th	9.25	36.00						
50th	13.00	42.00	Q1–Q3:	Q1–Q3:	0	3.06	< .001	.883
75th	19.00	44.75	9.25–19.00	36.00–44.75				

Note. TMS = Trait Mindfulness Scale. Values are percentile scores. IQR = interquartile range (25th to 75th percentile). T = 0 indicates all 12 participants improved. Z = standardised test statistic. r = Z/√N (effect size; ≥ .50 = large). Cohen's d is not reported as individual-level standard deviations were not available. p-values are two-tailed exact.

Table 7

Summary of Inferential Statistics Across All Outcome Measures (N = 12)

Measure	Test	Statistic	p	Effect Size	Interpretation
BDI	McNemar	$\chi^2(1) = 6.125$	.013	φ = .714	Large
HAM-A	McNemar	$\chi^2(1) = 8.100$	.004	φ = .822	Large
Y-BOCS (overall)	McNemar	$\chi^2(1) = 6.125$	.013	φ = .714	Large
Y-BOCS (obsessions)	Wilcoxon	T = 0, Z = 3.06	< .001	r = .883, d = 2.12	Very large
Y-BOCS (compulsions)	Wilcoxon	T = 0, Z = 3.06	< .001	r = .883, d = 2.36	Very large
FFMQ	Wilcoxon	T = 0, Z = 3.06	< .001	r = .883	Very large
TMS	Wilcoxon	T = 0, Z = 3.06	< .001	r = .883	Very large

Note. BDI = Beck Depression Inventory; HAM-A = Hamilton Anxiety Rating Scale; Y-BOCS = Yale-Brown Obsessive-Compulsive Scale; FFMQ = Five Facet Mindfulness Questionnaire; TMS = Trait Mindfulness Scale. McNemar test was used for categorically scored measures (BDI, HAM-A, Y-BOCS overall); Wilcoxon signed-rank test was used for continuously scored measures (Y-BOCS subscales, FFMQ, TMS). φ = phi coefficient; r = Z/√N; d = Cohen's d (Y-BOCS subscales only, computed from SPSS means and SDs). Effect size benchmarks: small (.10/.20), medium (.30/.50), large (.50/.80), very large (> .80; Rosenthal, 1991). All effect sizes should be interpreted with caution given N = 12 and the absence of a randomised control group.

Follow-up assessment

A follow-up assessment was conducted approximately six months after the conclusion of the intervention through brief in-person contact with participants. While formal psychometric re-administration was not feasible at follow-up, participants were asked to reflect on their current management of OCD symptoms, anxiety, and daily functioning. Thematic review of participant responses indicated three consistent patterns. First, the majority of participants reported a continued ability to recognise and tolerate intrusive thoughts without acting on them, describing a reduced sense of urgency to perform compulsive rituals. Second, participants reported improved management of compulsive behaviours in daily life, noting that they were better able to delay or resist compulsions when these arose, particularly in situations that had previously triggered automatic compulsive responses. Third, several participants described a sustained awareness of the present moment, suggesting that mindfulness skills acquired during the intervention had been maintained as habitual tendencies rather than effortful practices. These qualitative observations, while not statistically quantifiable, are consistent with the post-intervention improvements recorded on the TMS and FFMQ, and suggest that the psychological gains associated with MBCBT may endure beyond the immediate intervention period. Formal longitudinal assessment using validated instruments is recommended in future studies to substantiate these self-reported impressions.

DISCUSSION

The findings of the present study provide preliminary support for Mindfulness-Based Cognitive Behavioral Therapy (MBCBT) in the treatment of Obsessive-Compulsive Disorder (OCD), as well as its significant impact on reducing comorbid anxiety and depression while enhancing mindfulness-related cognitive and emotional regulation skills. The observed reductions in Yale-Brown Obsessive-Compulsive Scale (Y-BOCS), Hamilton Anxiety Rating Scale (HAM-A), and Beck Depression Inventory (BDI) scores suggest that MBCBT may offer a promising intervention for individuals struggling with OCD and its associated psychological distress. These findings align with existing literature on the therapeutic potential of mindfulness-based interventions, which have been shown to target the cognitive and affective mechanisms underlying OCD, anxiety, and depression.

The observed 35% reduction in OCD symptom severity, corroborated by statistically significant reductions on both the Y-BOCS obsessions subscale (baseline M = 13.38 to post M = 6.25; T = 0, $p < .001$, r = .883, d = 2.12) and compulsions subscale (baseline M = 13.88 to post M = 4.50; T = 0, $p < .001$, r = .883, d = 2.36), is consistent with prior research suggesting the potential efficacy of mindfulness techniques in alleviating obsessive-compulsive behaviors. Existing studies have highlighted that mindfulness enhances cognitive flexibility, allowing individuals to disengage from intrusive thoughts rather than becoming entangled in compulsive responses (Fairfax, 2008; Leeuwerik et al., 2020). Traditional cognitive-behavioral treatments such as Exposure and Response Prevention (ERP), while effective, are often associated with high dropout rates due to the distressing nature of exposure tasks (Mancebo et al., 2011). In contrast, MBCBT offers a more tolerable therapeutic approach by shifting the emphasis from direct confrontation of obsessions to a non-judgmental acceptance of thoughts, thereby reducing experiential avoidance while fostering emotional resilience. This aligns with findings from Hertenstein et al. (2012), who observed that mindfulness-based cognitive therapy (MBCT) led to improved symptom management among OCD patients resistant to ERP.

However, the evidence base is not uniformly positive. Rupp et al. (2019) found that an adapted mindfulness-based program did not produce statistically significant reductions in Y-BOCS scores compared to a waitlist condition. Similarly, Külz et al. (2020) noted that while participants in MBCT-based programs reported improved psychological wellbeing, core OCD symptom severity showed more modest change. These findings suggest that MBCBT may act more directly on comorbid emotional dysregulation than on obsessive-compulsive symptoms per se, and underscore the importance of integrating structured behavioural components alongside mindfulness practice.

The significant 30% reduction in depressive symptoms, as evidenced by a statistically significant shift in BDI category from baseline to post-intervention ($\chi^2(1, N = 12) = 6.125$, $p = .013$, $\varphi = .714$), suggests the potential broader applicability of MBCBT beyond OCD-specific symptoms. This result is consistent with research demonstrating that mindfulness interventions disrupt maladaptive patterns of rumination, a core feature of depression (Segal et al., 2002; Frances et al., 2017). By cultivating meta-cognitive awareness, participants are

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able to detach from self-critical thought patterns and approach negative cognitions with greater acceptance, thereby mitigating the severity of depressive symptomatology (Van der Velden et al., 2015). Furthermore, the incorporation of cognitive restructuring techniques within MBCBT likely facilitated adaptive cognitive reappraisal, contributing to the overall reduction in negative affect and self-referential distress.

Similarly, the 28% improvement in anxiety symptoms, reflected in a statistically significant reduction in HAM-A severity category ($\chi^2(1, N = 12) = 8.100$, $p = .004$, $\varphi = .822$), is consistent with findings from previous research demonstrating that mindfulness reduces physiological hyperarousal and autonomic reactivity, both of which are central to anxiety pathophysiology (Goldin & Gross, 2010; Hofmann et al., 2010). Given that individuals with OCD frequently experience heightened anxiety sensitivity, the ability to observe distressing thoughts without reactively engaging in compulsive behaviors represents a fundamental shift in cognitive-emotional processing. This finding is further supported by Tang et al. (2015), who documented structural and functional changes in the prefrontal cortex and anterior cingulate cortex following mindfulness-based interventions, thereby elucidating the neurobiological underpinnings of MBCBT's efficacy.

The significant increases in FFMQ scores (median 55.50 to 128.00; $T = 0$, $p < .001$, $r = .883$) and TMS scores (median 13.00 to 42.00; $T = 0$, $p < .001$, $r = .883$) indicate that the therapeutic benefits of MBCBT extend beyond symptom reduction, facilitating long-term psychological resilience. Higher trait mindfulness scores suggest that participants internalized mindfulness skills, which may serve as a protective factor against future relapse. This is in line with research highlighting that sustained mindfulness practice fosters enduring changes in attentional control and emotional self-regulation, which are critical for the long-term management of OCD, anxiety, and depression (Didonna, 2024). Notably, these improvements were not merely transient state-level effects but rather reflected a fundamental shift in dispositional mindfulness, as evidenced by TMS scores. Such findings suggest that MBCBT not only ameliorates immediate psychopathological symptoms but also cultivates an enduring psychological framework that enables individuals to navigate distressing experiences with greater equanimity.

The broader implications of these findings highlight the necessity of integrating mindfulness-based interventions into mainstream OCD treatment protocols. Given the barriers associated with traditional ERP therapy, including emotional distress and limited accessibility, MBCBT presents a scalable and culturally adaptable intervention that may improve treatment adherence and engagement (Marques et al., 2010; Marsden et al., 2016). The group-based format of MBCBT not only enhances social support and collective learning but also fosters a shared therapeutic space that reduces stigma and isolation, factors that have historically been associated with treatment dropout. Additionally, the adaptation of Hindi-language guided mindfulness exercises in this study underscores the potential for MBCBT to be implemented across diverse cultural contexts, thereby broadening its reach and applicability.

Despite its strengths, the present study is not without limitations. The small sample size ($N = 12$) limits the generalizability of the findings. Future studies should target a minimum of 30 participants per group and employ randomized controlled trial (RCT) designs to establish stronger causal evidence. Additionally, the absence of a control group in the present study means that observed improvements cannot be attributed exclusively to the MBCBT intervention.Moreover, the follow-up assessment was brief and did not include formal psychometric re-administration of validated instruments, which limits the conclusions that can be drawn regarding long-term outcomes. Future research should incorporate structured follow-up assessments using standardised measures at six and twelve months to rigorously evaluate the durability of symptom reduction and mindfulness gains. Additionally, the reliance on quantitative outcome measures, while valuable, may not fully capture the lived experiences of participants. Incorporating qualitative methodologies, such as in-depth interviews and thematic analysis, could provide richer insights into the mechanisms underlying MBCBT's effectiveness and the individualized experiences of therapy participants.

In conclusion,this study offers preliminary findings consistent with the growing body of evidence suggesting MBCBT as a potentially effective intervention for OCD, anxiety, and depression, demonstrating its capacity to enhance cognitive flexibility, emotional resilience, and trait mindfulness. However, conflicting findings in the literature indicate that MBCBT may not be universally effective, and its role as a primary treatment for OCD remains debated.

Future Directions

Future research should address several areas to build on the present findings. First, the cross-cultural applicability of MBCBT warrants systematic investigation, as mindfulness constructs and their therapeutic framing may be interpreted differently across cultural and linguistic contexts beyond the Hindi-speaking Indian population examined here. Culturally adapted protocols should be developed and validated for diverse ethnic and regional groups to assess whether the benefits observed in this study generalise more broadly. Second, the feasibility and efficacy of digitally delivered MBCBT should be explored, given the growing availability of app-based mindfulness platforms and their potential to reach individuals who face barriers to in-person therapy, such as geographical distance, financial constraints, or persistent stigma. Third, direct head-to-head comparative trials between MBCBT and traditional ERP are needed to establish their relative efficacy, identify which patient profiles respond best to each approach, and inform evidence-based clinical guidelines for OCD management. Such trials would help clarify whether MBCBT is most effective as a standalone treatment, an adjunct to ERP, or a first-line option for patients who are unwilling or unable to engage with exposure-based methods. Finally, future studies should incorporate larger randomised controlled samples, active control conditions, and extended follow-up periods of at least one year to assess the long-term durability of MBCBT outcomes and its potential for relapse prevention.

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