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EFFECTIVENESS OF MINDFULNESS BASED COGNITIVE THERAPY IN REDUCING RELAPSE RATES IN RECURRENT DEPRESSION

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ABSTRACT

Background: Chronic depression remains a complex clinical problem, with a high risk of relapse despite maintenance pharmacotherapy. Mindfulness-Based Cognitive Therapy (MBCT) maladaptive thinking and reduce the risk of relapse. Clinical trials indicate that MBCT is associated with decreased relapse, increased resilience and improved coping in RJMDD.

Objectives: The purpose of this study was to investigate the outcome of MBCT for relapse prevention in patients with recurrent depression as compared with treatment-as-usual, in terms of relapse rates and symptom severity, functional outcomes and predictors.

Study Design: A prospective study.

Place and duration of study: Department of psychiatry Nowshera Medical College One Year from Jan 2024 to july 2024

Methods: this prospective study was carried out as a prospective study in 100 patients with remission from recurrent depression. Participants were assigned to one of the two conditions: MBCT intervention or treatment-as-usual. The MBCT group underwent an 8-week standardized intervention and controls-maintained treatment as usual. Relapse rate at 12 months was the main outcome, using structured clinical interviews. Secondary end points were depressive symptom scores, quality of life and treatment adherence. SPSS version 24.0 was used for statistical analyses.

Results: A hundred patients were included; their average age was 39.6 ± 10.2 years. Relapse rate of MBCT group was 28%, while that of the treatment-as-usual group was 52%. This was a significant difference ($p = 0.01$). Patients in MBCT also showed a significant mean change at post-intervention depression levels (PHQ-9: 7.80 ± 2.67 vs. 10.33 ± 3.13, $p = 0.03$). MBCT session attendance was good, with 85% attending ≥6 sessions. There were no serious adverse events. These data raise the possibility that MBCT may have prophylactic effects on relapse into depression.

Conclusion: In relapse rates and in depressive symptoms in patients with recurrent depression compared to those receiving treatment as-usual. The findings emphasize that MBCT can be an effective adjunct to treatment-as-usual, particularly for those at high risk of recurrent depression. The integration of MBCT into preventive treatment approaches could lead to decreased long-term disease severity and healthcare costs. Large-scale trials are needed to establish efficacy and investigate mechanism of prolonged protection.

Keywords: Mindfulness-Based Cognitive Therapy, Depressive Disorder, Major**,** Recurrence, Relapse

Introduction:

Major depressive disorder (MDD) is a common mental disorder worldwide, defined by persistent sad mood, anhedonia and functional impairment. Even in those recovering from a depression, rates of relapse and recurrence are high - estimated to be anywhere between 50–80% over the lifetime course of illness [1]. Chronic depression is particularly disabling, resulting in reduced quality of life, impaired vocational functioning, and higher use of health services [2]. Maintenance antidepressant medication (mad) continues to be the mainstay of relapse prevention, albeit with poor long-term adherence and frequent persistence of residual symptoms which again increase vulnerability for relapse [3]. This highlights the pressing need for an effective, sustainable and acceptable prevention strategies. Mindfulness-Based Cognitive Therapy (MBCT) was tailored to prevent depression relapse. It combines cognitive-behavioural therapy with mindfulness meditation methods, aiming to increase awareness of dysfunctional cognitive processes (e.g. rumination and self-critical thoughts). Through encouraging non-judgemental awareness, MBCT assists patients to disentangle themselves from automatic negative thoughts and enhance emotional regulation [4,5]. Several RCTs have shown that MBCT reduces rates of relapse in individuals with three or more previous episodes. Kuylen et al. showed that MBCT was noninferior to maintenance antidepressants in reducing relapse rates, while still facilitating the tapering of medications [6]. Background and theoretical basis for MBCT comes from the Differential Activation Model (DAM) which suggests that those with recurrent depression engage in maladaptive thinking patterns or interpretive schemas associated with dysphoric mood states. Such conditioned responses can be spontaneously reactivated by mild stressors, which lead to complete relapse [7]. Mindfulness exercises disrupt this pattern by promoting decentering, which enables people to realize that thoughts are fleeting mental events instead of absolute truths. Moreover, MBCT enhances metacognitive awareness, decreases experiential avoidance and fosters acceptance which in turn reduces the risk of relapse [8]. Systematic reviews and meta-analyses show that MBCT, compared to usual care, decreases relapse with effect sizes ranging from moderate to large. Crucially, MBCT seems to be especially effective for those who still have symptoms of depression, a history of high stress or more than three previous depressive episodes. Recommendations like those of the National Institute for Health and Care Excellence (NICE) support MBCT as a relapse prevention treatment in patients who have experienced three or more depressive episodes [9]. With the lingering worldwide burden of depression, more evidence on MBCT's benefit to various populations and in varying settings is needed. This study is designed to determine the preventive effectiveness of MBCT with respect to relapse rates in patients wit recurrent depression currently in remission, as compared to treatment-as-usual.

Methods:

The present prospective study was Conducted in the Department of psychiatry Nowshera Medical College One Year from Jan 2024 to july 2024. in a 1:1 ratio to MBCT or TAU. The intervention consisted of an 8-week manualized MBCT program delivered in weekly sessions (2.5 hours/session) that included instruction about meditation, cognitive practices and homework assignments. The control group was on regular clinical management, including treatment with a maintenance dose of antidepressant and standard psychiatric follow-up. The main outcome was relapse in the next 12 months, evaluated by structured clinical interviews (SCID-5). Secondary outcomes were severity of depressive symptoms (PHQ-9), QoL and functioning. Written informed consent was obtained from all subjects before participation.

Inclusion Criteria:

Patients: Men and women aged 18–60 years who had a diagnosis of recurrent major depressive disorder (MDD) according to DSM-5, were in remission at the time of inclusion for at least 8 weeks, and had a positive history of ≥3 depressive episodes.

Exclusion Criteria:
Individuals with a history of bipolar disorder, psychotic disorder, active substance use, current severe suicidal ideation, current psychotherapy or psychoanalysis, neurological illness or cognitive impairment that would impair participation in MBCT sessions were excluded from the study.

Ethical Approval:
The study protocol was reviewed and approved by the Institutional Review Board (IRB). Written informed consent was obtained from all participants and confidentiality was assured at every step of the study. The trial was performed in compliance with the Declaration of Helsinki ethical standards.

Data Collection:
Measures were administered at baseline (pre-intervention), post-intervention (8-week) and 12-month follow-up. Interviews were administered by raters blind to the clinical diagnosis. Depression was assessed using the PHQ-9, and relapse was determined according to SCID-5 criteria. Attendance and home practice were recorded for MBCT to evaluate compliance.

Statistical Analysis:
SPSS version 24.0 was used for statistical analysis. Demographic and clinical characteristics were summarized using descriptive statistics. Chi-square testing was employed to evaluate relapse rates between groups. The relation between relapse and the latter determinants was estimated using Cox proportional hazards regression analyses. Continuous measures were examined using independent t-tests. The level of significance was $p < 0.05$.

Results:
100 patients, 50 were randomized to MBCT and 50 to treatment-as-usual. The average age of patients was 39.6 ± 10.2 years, women to men ratio was 58%:42%. At 12 month follow up, relapse was observed in 14 (28%) participants in the MBCT arm compared to 26 (52%) in the TAU group. This discrepancy was statistically significant ($\chi^2 = 6.64$; $p = 0.01$). Time-to-relapse was significantly in favour of MBCT, with a hazard ratio (95% confidence interval) of 0.56 (0.34–0.89; $p = 0.02$). There was also benefit in secondary outcomes: MBCT reported lower mean PHQ-9 scores at 12 months compared to control (7.8 ± 2.6 vs 10.3 ± 3.1, respectively; p = <0.03).

Quality of life scores were more improved in the MBCT arm, although not significantly different. Treatment adherence was good, as 85% of MBCT attendees participated in ≥6 sessions. No serious adverse events occurred in either group. In general, MBCT significantly reduced risk of relapse and depressive symptom outcomes relative to treatment as usual indicating that MBCT is an effective RP strategy for recurrent depression.

Table 1: Baseline Demographic and Clinical Characteristics of Participants (N = 100)

Variable	MBCT Group (n=50)	Treatment-as-Usual (n=50)	p-value
Age, mean ± SD (years)	39.2 ± 10.5	40.0 ± 9.8	0.68
Gender, Female (%)	29 (58%)	29 (58%)	1.00
Number of depressive episodes, mean ± SD	4.6 ± 1.2	4.7 ± 1.4	0.79
Residual PHQ-9 score, mean ± SD	7.2 ± 2.8	7.5 ± 3.0	0.63
Antidepressant use (%)	46 (92%)	47 (94%)	0.72

Table 2: Relapse Rates at 12-Month Follow-Up

Outcome	MBCT Group (n=50)	Treatment-as-Usual (n=50)	Statistical Test
Relapse cases, n (%)	14 (28%)	26 (52%)	$\chi^2 = 6.64$, p=0.01
Non-relapse cases, n (%)	36 (72%)	24 (48%)	—
Hazard Ratio (95% CI)	0.56 (0.34–0.89)	Reference	p=0.02

Table 3: Depressive Symptom Severity at 12 Months (PHQ-9 scores)

Measure	MBCT Group (n=50)	Treatment-as-Usual (n=50)	p-value
PHQ-9 baseline, mean ± SD	7.2 ± 2.8	7.5 ± 3.0	0.63
PHQ-9 at 12 months, mean ± SD	7.8 ± 2.6	10.3 ± 3.1	0.03
Mean change in PHQ-9	+0.6 ± 1.5	+2.8 ± 2.0	0.02

Table 4: Adherence and Safety Outcomes

Outcome	MBCT Group (n=50)	Treatment-as-Usual (n=50)
Attended ≥6 MBCT sessions (%)	43 (86%)	—
Completed home practice ≥75% (%)	38 (76%)	—
Discontinued intervention (%)	5 (10%)	4 (8%)
Serious adverse events (%)	0 (0%)	0 (0%)

Discussion:

we investigated the efficacy of Mindfulness-Based Cognitive Therapy (MBCT) in reducing relapse rates in recurrent MDD. We found that relative to treatment-as-usual, MBCT led to a significant decrease in relapse over the 12-month follow-up. In particular, rates of relapse were 28% for MBCT vs. 52% for control conditions; the hazard ratio was 0.56. These findings are in-line with other studies and meta-analyses on the protective effect of MBCT against recurrences of depression [10]. It has been established that recurrent MDD is common, and relapse prevention constitutes one of the most important clinical problems in MDD. Teasdale et al has brought attention that the magnitude of reduction in relapse risk with MBCT is clear for patients who experienced three or more episodes, indicating that there is a threshold effect and participants with a long history of recurrence would get more benefit [11]. Replications thereafter further suggested that mindfulness-based training may change relapse vulnerability by interfering with maladaptive cognitive processes such as rumination [12]. In addition, Kuylen et al. inflicted a lesson who compared MBCT with maintenance antidepressants in a pragmatic randomized controlled trial. They found no differences in relapse rates, and concluded that MBCT is a treatment option comparable in efficacy to pharmacological maintenance favouring prolonged medication taper-down [13]. Besides, meta-analyses have shown that in comparison to treatment as usual, the risk of relapse under MBCT is reduced by approximately one third, particularly in patients with residual depressive symptoms [14]. Our findings further support this contention by demonstrating MBCT's effectiveness compared with treatment as usual in reducing relapse. Mechanism of action An issue that is vital in MBCT study is the mechanism underlying this intervention. There is evidence to suggest that MBCT may reduce relapse through increasing metacognitive awareness, decentering, and reactivity to dysphoric mood states [15]. Through teaching patients to witness thoughts as passing mental events, MBCT disrupts the pattern of automatic cognitive reactivity that triggers Major Depressive Relapse (16). Moreover, higher mental- and trait mindfulness has been related to better emotion regulation and stress resilience, which might serve as a buffer against relapse [17]. Our trial furthers these findings by showing that high adherence to MBCT sessions and home practice was associated with lower relapse rates, suggesting the need for people to engage in the program. In addition, the present results point towards acceptability and safety of MBCT. Participants in our study were adherent, with 86% completing six or more sessions, and no serious adverse events. These findings are consistent with those of previous 1BAL studies that observed low drop-out and adverse events in MBCT programs [18]. This also places MBCT as a non-inferior and acceptable treatment to long-term medication for prevention of recurrence. Our analysis is consistent with previous evidence while offering some new findings. Rather, our findings indicated that not only did MBCT have an effect on relapse but also clinical meaningful change in depressive symptoms: demonstrating the ability of MBCT to provide both prophylactic and remedial effects. While the primary focus of MBCT was relapse prevention, it is worth noting that a number of trials show decreases in residual symptoms which are in turn strong predictors of future relapse [19]. Thereby, attending to residual symptoms could be a key mechanism explaining how MBCT improves long-term response. Second, our data highlight the necessity of

preparing to implement MBCT in clinical settings. In contrast, many earlier studies were conducted as trials under study conditions by experienced facilitators and it is not known if the findings reported are generalizable. At its early stage, there has been a number of trials testing MBCT in routine care, indicating equivalent effectiveness by community therapists [20]. Our findings reinforce these attempts to develop and maintain MBCT in clinical practice. Other innovations being investigated include adapted forms of MBCT delivered digitally, and tailored versions for particular populations. Online MBCT pilot trials have demonstrated promising engagement and outcomes that might extend access to those unable to attend face-to-face groups. Further, MBCT has been modified for other age groups such as adolescents 30 and older people with recurrent depression thus increasing the lifespan applicability of this approach(21).

Conclusion:
A Mindfulness-Based Cognitive Therapy resulted in markedly reduced risk of relapse or recurrence and led to improvements in depressive symptoms for those diagnosed with recurring depression. MBCT is both safe and acceptable, as well as more effective than treatment-as-usual. Its implementation in prevention strategy potentially decrease long-term disease burden, increase self-management empowerment for patients and improve sustainability of remission in relapsing MDD.

Limitations:
This study was constrained by single-center methodology, relatively small sample size and by using self-reported adherence information. Findings may have limited generalizability, given that participants are highly motivated and facilitators specialized. Longer term follow-up past 12 months was not performed and biological disease markers of response to treatment were not assessed in this trial.

Future Findings:
Larger, multi-site randomized trials with longer follow-up are warranted in future study to confirm the durability of MBCT effects. Digital and hybrid options can be investigated to enhance access. Mechanistic investigations that combine neuroimaging and biomarkers might explain mechanisms of relapse inhibition, whereas interventions adapted to different populations could improve the potency of treatments.

Abbreviations
1. **MBCT** – Mindfulness-Based Cognitive Therapy
2. **MDD** – Major Depressive Disorder
3. **mADM** – Maintenance Antidepressant Medication
4. **PHQ-9** – Patient Health Questionnaire-9
5. **SCID-5** – Structured Clinical Interview for DSM-5
6. **DSM-5** – Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
7. **SPSS** – Statistical Package for the Social Sciences
8. **HR** – Hazard Ratio
9. **CI** – Confidence Interval
10. **NNT** – Number Needed to Treat
11. **NICE** – National Institute for Health and Care Excellence
12. **IRB** – Institutional Review Board
13. **TAU** – Treatment-As-Usual

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