



## EFFECT OF MINDFULNESS BASED COGNITIVE THERAPY ON STRESS AMONG PATIENTS WITH DIABETES MELLITUS

**Ms. Bramaramba D Honnugudi\***

Assistant Professor, Department of Clinical Psychology, Adichunchanagiri Institute of Medical Sciences, Adichunchanagiri University, B.G.Nagar - 571448, Mandya Dist. \*Corresponding Author

**Dr. G Venkatesh Kumar**

Retd. Professor, Dos in Psychology, Manasagangotri, University of Mysore-570006

**KEYWORDS :** Diabetes Mellitus, Mindfulness Based Cognitive Therapy, Stress.

### INTRODUCTION

Diabetes Mellitus is a chronic metabolic disorder characterized by persistent hyperglycaemia due to impairments in insulin secretion, insulin action, or both. The prevalence of diabetes has been increasing globally, posing a significant public health challenge (World Health Organization, 2023). Beyond its physiological complications, diabetes is closely associated with psychological distress, particularly stress, which adversely affects disease management and overall well-being (Lloyd et al., 2005). Individuals living with diabetes frequently experience stress arising from the demands of continuous self-care, including blood glucose monitoring, adherence to dietary restrictions, medication routines, and fear of long-term complications (Peyrot et al., 1999).

Stress plays a crucial role in the progression of diabetes, as it activates the hypothalamic-pituitary-adrenal (HPA) axis, leading to elevated cortisol levels that can impair glycemic control (Chandola et al., 2006). Chronic stress has been linked to poor treatment adherence, unhealthy lifestyle behaviors, and increased risk of diabetes-related complications (Gonzalez et al., 2008). Therefore, addressing psychological stress is an essential component of comprehensive diabetes care.

In this context, Mindfulness-Based Cognitive Therapy (MBCT) has emerged as a promising intervention. Developed by Segal, Williams, and Teasdale (2002), MBCT integrates cognitive behavioural principles with mindfulness practices to help individuals develop non-judgmental awareness of their thoughts and emotions. This approach enables patients to disengage from maladaptive cognitive patterns and reduce emotional reactivity (Kabat-Zinn, 1990).

Evidence suggests that mindfulness-based interventions, including MBCT, are effective in reducing perceived stress and enhancing emotional regulation among individuals with chronic illnesses (Grossman et al., 2004; Hofmann et al., 2010). In patients with diabetes, MBCT can improve coping mechanisms, promote acceptance of the illness, and reduce diabetes-related distress, thereby contributing to better psychological outcomes and potentially improved glycaemic control (Rosenzweig et al., 2007).

Despite the growing body of literature supporting mindfulness-based approaches, there is still a need for focused research examining the specific effects of MBCT on stress among patients with Diabetes Mellitus, particularly in diverse cultural contexts. Understanding this relationship can contribute to the development of holistic and integrative treatment strategies for diabetes management.

### MATERIALS AND METHOD

The present study employed a pre-test and post-test experimental design to examine the effectiveness of

Mindfulness-Based Cognitive Therapy (MBCT) in reducing stress among patients with Diabetes Mellitus. A total of 60 patients diagnosed with Diabetes Mellitus were included in the study, with 30 participants assigned to the experimental group and 30 to the control group. Baseline stress levels were assessed for all participants using the Depression Anxiety Stress Scales (DASS) prior to the intervention. The experimental group received MBCT intervention consisting of eight sessions conducted once a week, focusing on developing mindfulness skills, enhancing present-moment awareness, and fostering non-judgmental acceptance of thoughts and emotions, while the control group received routine care without any psychological intervention. Following the completion of the intervention, post-test assessment of stress was conducted for both groups using DASS. The collected data were analysed using SPSS, ANOVA to determine the effectiveness of the intervention.

**Table – 1 Repeated Measures ANOVA for Stress Scores**

Effect	Df	F	p
Time(pre-post)	1,58	11.442	.001**
Timex Group	1,58	162.162	.001**
Group	1,58	13.574	.001**

Repeated measures ANOVA revealed a significant reduction in mean stress scores from pre-test to post-test ( $F = 11.442, p = .001$ ). A significant interaction effect between time and group was also observed ( $F = 162.162, p = .001$ ), indicating that the experimental group showed a greater reduction in stress compared to the control group. Additionally, a significant difference between groups was found ( $F = 13.574, p = .001$ ), suggesting that the experimental group differed significantly from the control group in overall stress scores.

### DISCUSSION

The present study examined the effect of Mindfulness-Based Cognitive Therapy (MBCT) on stress among patients with diabetes mellitus. The findings revealed a significant reduction in stress levels from pre-test to post-test, irrespective of group, indicating that stress levels changed over time. More importantly, the significant interaction effect between time and group suggests that the reduction in stress was greater in the experimental group compared to the control group, demonstrating the effectiveness of MBCT in managing stress among diabetic patients.

The significant between-group differences further confirm that participants who received MBCT exhibited lower stress levels compared to those in the control group. This indicates that MBCT is not only effective over time but also superior to routine care or control conditions in reducing stress. These findings are consistent with previous research, which highlights that mindfulness-based interventions improve emotional regulation, reduce psychological distress, and enhance coping mechanisms in individuals with chronic illnesses, including diabetes.

The observed reduction in stress among the experimental group may be attributed to the core components of MBCT, such as present-moment awareness, non-judgmental acceptance, and cognitive restructuring. These mechanisms help individuals disengage from maladaptive thought patterns, reduce rumination, and develop adaptive coping strategies, thereby lowering stress levels.

Given that stress is a critical factor influencing glycaemic control and overall disease management in diabetes mellitus, the reduction in stress through MBCT has important clinical implications. Incorporating MBCT into routine diabetes care may enhance psychological well-being and potentially improve treatment outcomes.

However, the study is not without limitations. The sample size was relatively small, and the duration of follow-up was limited. Future research may consider larger samples, long-term follow-up, and inclusion of physiological measures such as HbA1c to further validate the effectiveness of MBCT.

In conclusion, the findings suggest that MBCT is an effective intervention for reducing stress among patients with diabetes mellitus and can be considered a valuable addition to comprehensive diabetes management programs.

## REFERENCES

1. World Health Organization. (2023). Diabetes. <https://www.who.int/news-room/fact-sheets/detail/diabetes>
2. Lloyd, C., Smith, J., & Weinger, K. (2005). Stress and diabetes: A review of the links. *Diabetes Spectrum*, 18(2), 121–127. <https://doi.org/10.2337/diaspect.18.2.1213>. Peyrot, M., McMurry, J. F., & Kruger, D. F. (1999).
3. A biopsychosocial model of glycemic control in diabetes: Stress, coping and regimen adherence. *Journal of Health and Social Behavior*, 40(2), 141–158. Chandola, T., Brunner, E., & Marmot, M. (2006).
4. Chronic stress at work and the metabolic syndrome. *BMJ*, 332(7540), 521–525. <https://doi.org/10.1136/bmj.38693.435301.805>. Gonzalez, J. S., Peyrot, M., McCarl, L. A., et al. (2008).
5. Depression and diabetes treatment nonadherence: A meta-analysis. *Diabetes Care*, 31(12), 2398–2403. <https://doi.org/10.2337/dc08-1341>
6. The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, 78(2), 169–183. <https://doi.org/10.1037/a0018555>
7. Mindfulness-based stress reduction lowers psychological distress in medical patients. *Journal of Psychosomatic Research*, 62(1), 23–29. <https://doi.org/10.1016/j.jpsychores.2006.07.0086>. Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002) *Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse*. New York: Guilford Press.
8. The effectiveness of mindfulness-based interventions on glycemic control and psychological outcomes in diabetes: A meta-analysis. *Journal of Diabetes Investigation*, 11(6), 1526–1534. <https://doi.org/10.1111/jdi.13282>