

## **The Comparison of the Effect of Mindfulness-Based Relaxation Training and Trans Cranial Electrical Stimulation and Their Combination on Decreasing Physiological Distress in Patients with Type-2 Diabetes**

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**Abstract :** The present study was a randomized three-group double-blind clinical trial with repeated measures designs which aimed to determine the pure effect and combined effect of mindfulness based-relaxation (MBR) technique and Transcranial Electrical Stimulation (tCES) on psychological distress decreasing of patients with type-2 diabetes. The sample of the study consisted of 30 patients with type-2 diabetes who were selected from the Diabetes Association of Bonab city in Iran. The participants were matched and then randomly assigned to the three groups of 10 subjects (MBR, CES, MBR+CES). The subjects received interventions related to their group in 10 individual sessions. Pre-test, post-test, and one-month follow-up were conducted using DASS-42. Analysis of variance with repeated measures showed a significant change in psychological distress. Multivariate covariance analysis and the paired interpersonal comparative test of Ben Foruni indicated that both interventions of MBR and CES have a similar effect on psychological distress decreasing in the post-test and follow-up phase. But, the combined therapy of MBR+CES was more efficient, and it had a more stable effect. However, all three interventions, especially combined intervention of MBR+CES, as efficient and stable treatment, are suggested for improving the psychological status of diabetic patients.

**Keywords :** mindfulness based-relaxation, transcranial electrical stimulation, type 2 diabetes, psychological distress

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