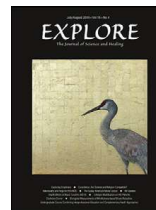




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## Effects of mindful breath awareness and muscle relaxation and transcranial electrical stimulation techniques on improving blood pressure status in patients with type 2 diabetes

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### ARTICLE INFO

#### Article History:

Received 4 August 2020

Revised 13 April 2021

Accepted 9 May 2021

Available online xxx

#### Keywords:

Systolic blood pressure

Diastolic blood pressure

Mindful breath awareness

Muscle relaxation

Transcranial electrical stimulation

Type 2 diabetes

### ABSTRACT

**Objective:** The present study aimed to determine the effects of mindful breath awareness & muscle relaxation (MBMR) and transcranial electrical stimulation (tCES) techniques on improving the systolic and diastolic blood pressure status in patients with type 2 diabetes.

**Methods:** The research method was randomized controlled trial (RCT) using split-plot ANOVA (SPANOVA). Thirty patients were selected through purposive sampling from Bonab County Diabetes Association (Iran) and were randomly divided into three 10-member groups, namely MBMR, tCES, and MBMR+tCES groups. Participants received their group interventions in 10 individual sessions. All patients were evaluated for systolic and diastolic blood pressure at two stages, before and immediately after each session. SPANOVA and Bonferroni pairwise comparison tests were used for data analysis.

**Results:** The results indicated that the MBMR and tCES techniques, alone and in combination, had significant and equal effects on reducing diastolic blood pressure, but the MBMR treatment was more effective in the systolic blood pressure than the tCES.

**Conclusions:** The MBMR and tCES techniques were effective and safe in treating hypertension in patients with type 2 diabetes.

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