Effect of Neurofeedback Therapy versus Group Reality Therapy on Anxiety and Depression Symptoms among Women with Breast Cancer: A Clinical Trial Study

Elahi Nejad S: Department of Psychology, Faculty of Psychology and Educational Sciences, Semnan University, Semnan, Iran
Makvand-Hosseini Sh: Department of Psychology, Faculty of Psychology and Educational Sciences, Semnan University, Semnan, Iran
Sabahi P: Department of Psychology, Faculty of Psychology and Educational Sciences, Semnan University, Semnan, Iran

Corresponding Author: Shahrokh Makvand-Hosseini, shmakvand@semnan.ac.ir

Abstract

Introduction: The aim of the current research was to compare the effectiveness of neurofeedback therapy and reality therapy in improving the psychological symptoms of depression and state-trait anxiety in women with breast cancer.

Methods: In a clinical trial with a pretest-posttest and follow-up design, 45 of 135 breast cancer patients in Amol city in 2017 were enrolled after controlling for inclusion/exclusion criteria. Subjects were randomly divided into 3 groups: reality therapy, neurofeedback therapy, and control. All participants completed the Beck Depression Inventory (BDI) and the State-Trait Anxiety Inventory (STAI) at 3 time points. Data were analyzed using a MANCOVA test.

Results: Significant differences were observed in the mean DPI and STAI scores among the three groups at posttreatment. Lower mean posttest depression scores were obtained for the two therapy groups compared with the control group, with better results for the reality therapy (p<0.05). The mean STAI score was significantly lower for the reality therapy group than for the control group (p<0.05), while only a positive trend was observed for the neurofeedback. In sum, a significant improvement of 2.28 to 6.64 points relative to baseline was observed in the mean depression and anxiety scores after the psychological therapies. These therapeutic effects even increased over the 4 months of follow-up, indicating the consistency of therapeutic effects for both treatments (p<0.05).

Conclusion: The reality therapy and neurofeedback therapy could effectively decrease state-trait anxiety and depression symptoms in breast cancer patients, with robust effects for reality therapy, and are recommended to these patients. Given the economy and availability of reality therapy, we recommend reality therapy as an adjunct treatment for breast cancer patients.

Keywords: Breast Cancer, Anxiety, Depression, Neurofeedback, Reality Therapy