

# The Effect of Neurofeedback Training on Anxiety and Depression in Students with Attention Deficit/Hyperactivity Disorders

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**Source:** Journal of Education and Community Health, Vol 2, Iss 4, Pp 41-47 (2016)

**Publisher Information:** Hamadan University of Medical Sciences, 2016.

**Publication Year:** 2016

**Collection:** LCC:Public aspects of medicine

**Subject Terms:** Attention Deficit Disorder with Hyperactivity  
Anxiety  
Depression  
Neurofeedback  
Public aspects of medicine

**Description:** Background and Objectives: Neurofeedback training method, as a relatively new therapy method, is being used for treatment of diseases and disorders. This research aimed to investigate the effect of neurofeedback training on anxiety and depression in students with attention deficit/hyperactivity disorder. Materials and Methods: This was a semi-experimental study with a pre-test and post-test design. The statistical population included all the elementary students with attention deficit/hyperactivity disorder, referred to counseling centers of Pakdasht city in 2015 academic year. Totally, 40 students were selected through the available sampling method and randomly assigned to two groups (each group had 20 person). The experimental group was educated with 12 sessions of 60 minutes by neurofeedback method. For data collection, the questionnaires of Cattell anxiety and Beck depression were used. Data was analyzed using SPSS-19 software and multivariate analysis of covariance (MONCOVA) method. Results: The results showed that the mean and standard deviation of anxiety and depression before the intervention in the neurofeedback group were respectively  $46.63 \pm 4.22$  and  $37.61 \pm 5.83$ ; but after the intervention, the mean and standard deviation of anxiety and depression in the neurofeedback group become  $35.09 \pm 3.81$  and  $25.78 \pm 3.64$ , respectively. In addition, the result showed that neurofeedback training method significantly led to the decrease of anxiety and depression in students with attention deficit/hyperactivity disorder ( $P < 0.001$ ). Conclusions: Regarding the results of this research, it is suggested that therapists and clinical psychologists use neurofeedback training for decreasing anxiety and depression in students with attention deficit/hyperactivity disorder.

**Document Type:** article

**File Description:** electronic resource

**Language:** Persian

**ISSN:** 2383-2312

**Relation:** [http://jech.umsha.ac.ir/browse.php?a\\_id=182&slc\\_lang=en&sid=1&ftxt=1](http://jech.umsha.ac.ir/browse.php?a_id=182&slc_lang=en&sid=1&ftxt=1); <https://doaj.org/toc/2383-2312>

**DOI:** 10.21859/jech-02046

**Access URL:** <https://doaj.org/article/24abd66ecb6f410d964afe53d5779d1d>

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**Accession Number:** edsdoj.24abd66ecb6f410d964afe53d5779d1d

DOI: 10.21859/jech-02046

## The Effect of Neurofeedback Training on Anxiety and Depression in Students with Attention Deficit/Hyperactivity Disorders

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### Abstract:

**Background and Objectives:** Neurofeedback training method, as a relatively new therapy method, is being used for treatment of diseases and disorders. This research aimed to investigate the effect of neurofeedback training on anxiety and depression in students with attention deficit/hyperactivity disorder.

**Materials and Methods:** This was a semi-experimental study with a pre-test and post-test design. The statistical population included all the elementary students with attention deficit/hyperactivity disorder, referred to counseling centers of Pakdasht city in 2015 academic year. Totally, 40 students were selected through the available sampling method and randomly assigned to two groups (each group had 20 person). The experimental group was educated with 12 sessions of 60 minutes by neurofeedback method. For data collection, the questionnaires of Cattell anxiety and Beck depression were used. Data was analyzed using SPSS-19 software and multivariate analysis of covariance (MONCOVA) method.

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**Conclusions:** Regarding the results of this research, it is suggested that therapists and clinical psychologists use neurofeedback training for decreasing anxiety and depression in students with attention deficit/hyperactivity disorder.

**Keywords:** Attention Deficit Disorder with Hyperactivity, Anxiety, Depression, Neurofeedback

Type of Study: Research Article | Subject: Special

Received: 2016/06/23 | Accepted: 2016/08/28

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