

Extended Abstract

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Research paper

The Effectiveness of Cognitive Behavioral Group Intervention on Self-efficacy in Hearing Impaired Students with Anxiety Symptoms

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Introduction

Today, the most common sensory disorder of children in the world is hearing loss. The presence of hearing impairment makes children's development in communication, social, cognitive, emotional and educational dimensions face many limitations (World Health Organization, 2023). In studies, psychological problems such as anxiety, depression, social problems and lack of self-esteem are seen in children with hearing impairment (Kim & et al, 2023; ChenaYan & Wang, 2022). Self-efficacy is one of the basic variables in the learning process and performance of students (Szulc, 2022) that this variable is especially important for hearing impaired students who have to start their real life after leaving school (Rahimi & et al, 2021). Studies show that due to communication problems in students with hearing impairment, the level of self-esteem and self-efficacy in them is too low (Hammad & Awed, 2023; Adigun, 2020). According to research literature, teaching cognitive-behavioral skills improves the level of self-esteem and anxiety in students with hearing impairment (Pegg & et al, 2022). Although cognitive behavioral therapy has been shown to be an effective treatment for anxiety disorders, this treatment has not been used for many children (Gunter & Whittal, 2010) and anxious children with hearing loss, despite being more exposed to anxiety disorders, have been less studied as a special group. Also, the effectiveness of this treatment model in working with anxious students with hearing loss is not very clear in terms of self-efficacy. According to the review of the background, it can be assumed that cognitive behavioral therapy is able to help anxious students with hearing loss in the category of self-efficacy that manifests in their academic, occupational and social improvement. Therefore, the present study was conducted with the aim of determining the effectiveness of cognitive behavioral group intervention on the self-efficacy of hearing impaired students with anxiety symptoms.

Method

The method of the current research was a quasi-experimental study that was conducted as a pretest-posttest with a control group. The statistical population included all deaf students of Bojnourd and Shirvan cities in 2021. Which among them, 24 students with moderate and severe hearing impaired with anxiety symptoms were selected as the research sample and were randomly placed in two experimental and control groups. Inclusion criteria were (1) age 12-18 years, (2) Studying in a special school for the deaf, (3) IQ of 90 and above. Exclusion criteria were (1) Simultaneous participation in other psychotherapy programs, (2) More than one

absence, (3) Having any other disability other than deafness. The process was that after obtaining the necessary permits, the researcher went to the special schools for the deaf and conducted a short interview with the students to obtain informed consent to participate in the research. Then, Beck's Anxiety Inventory (BAI, 1988) was administered to students with hearing impairment, and students with a cut-off score of 26 and above, if they met the entry criteria, were randomly placed in two experimental and control groups (12 people in each group). In addition, 6 students with moderate hearing impairment and 6 students with severe hearing impairment were placed in each group. Then, the experimental group received cognitive behavioral therapy for 12 sessions of 45 minutes once a week, but the control group did not receive any training. Then, one week after the last session, a post-test was taken from both groups and the data was analyzed using SPSS version 24 software with one and multiple covariance analysis. The tools were: Beck Anxiety Inventory (BAI,1988), Child Self-Efficacy Questionnaire (SEQ-C, 2001) and the Cognitive Behavioral Intervention protocol taken from the therapeutic manual of Hope et al. (2004).

Results

The mean (and standard deviation) age in the experimental group was 13.50 (3.24), and in the control group was 14.40 (1.17). The results of Wilk's Lambda test indicated that there is a significant difference between two groups of test and control in terms of self-efficacy ($F=6.080$, $P<0.001$, $\eta^2=0.518$). Based on the eta square, 51.8% of the variance of the self-efficacy component variable is due to the experimental effect.

1. The results of multivariate covariance analysis to investigate the effect of cognitive-behavioral group intervention on self-efficacy components

Source	Variable	SS	df	MS	F	P	Partial Eta
Group	social	180.205	1	180.205	20.09	0.001	0.514
	educational	129.844	1	129.844	6.93	0.016	0.267
	emotional	161.694	1	161.694	8.58	0.009	0.311

The results of multivariate covariance analysis (table 1) indicated that there is a significant difference between two groups of test and control in terms of all self-efficacy components ($P<0.001$). The eta squared shows that 51.4% of the variance in social self-efficacy, 26.7% of the variance in educational self-efficacy, and 31.1% of emotional self-efficacy are due to experimental conditions ($P<0.01$).

Discussion

The results of the present study showed that cognitive behavioral group intervention was effective on the self-efficacy of the students studied. In a way, the average overall self-efficacy score in all components (academic, social, and emotional) improved after the therapeutic interventions. These results are in line with the other studies (Peg & et al, 2022; Gunter & Whittal, 2010). In the present explanation, it can be said that Students with hearing impairment usually do not believe in their abilities and their self-efficacy is low due to the difficulties they have in processing linguistic information. Despite the anxiety, this issue makes people with hearing loss more vulnerable and reduces their self-efficacy more and more. Cognitive behavioral group intervention in the present study was able to improve the self-efficacy of hearing impaired students with anxiety symptoms. By changing dysfunctional beliefs and behaviors and directing them towards healthier patterns of thinking and behavior, this therapeutic method empowers students with hearing impairment to find different ways to overcome life's obstacles and difficulties. In fact, this therapy helps anxious deaf students to put aside their irrational thoughts, fears and worries, and by changing their thinking, they can make sure that they can not consider their problem and weakness as a reason for their inability and believe in other ways of progress and success. Therefore, this increases their self-efficacy and is recommended as a beneficial intervention in educational and treatment centers. The

limitations of the present study were the use of available sampling and the use of questionnaires in data collection.

Ethical Consideration

This study was preregistered at the Vice-Chancellor for academic affairs and Graduate Education, Faculty of Literature and Humanities, University of Guilan, Iran.

Financial Support

This study had no financial support.

Authors' Contributions

Nastaran Talashan conducted the research, implementation of training, methodology, and statistical analysis. Niloofar Zahedi Bialvayi Prepared the original draft of the article, editing and revising the article.

Conflict of Interest

This research has no conflict of interest for the authors.

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