



Effectiveness of play therapy based on cognitive esteem and working memory of children with hearing and speech disorders

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Abstract

Aim: the purpose of this research was to determine the effectiveness of play therapy based on the cognitive-behavioral approach on self-esteem and working memory of children with hearing-speech disorders. **Methods:** The current research is a quasi-experimental type of research. The statistical population of the research is all people (girls and boys) with hearing-speech impairment aged 8 to 12 years, who formed Tabasom rehabilitation center in Falavarjan city in 2021-22. Sampling included 30 boys and girls with hearing and speech disorders who were selected as convenience sampling and were placed in two groups of 15 people, experimental and control group. Also, analysis of variance with repeated measurements and Bonferroni's post hoc test were used to analyze the data. **Results:** The findings showed that the average score of active memory (inverted digits) and self-esteem after game therapy in the experimental and control groups had a significant difference ($P < 0.05$). The score of self-esteem and active memory (inverted numbers) in the experimental group was higher than the control group ($P < 0.05$). There was no significant difference in the mean of active memory score (forward digit span) after game therapy in the experimental and control groups ($P < 0.05$). **Conclusion:** It can be concluded that play therapy based on cognitive-behavioral approach is effective on self-esteem and working memory of children with hearing and speech disorders, and cognitive-behavioral play therapy can be implemented in rehabilitation centers, clinics, and schools.

Keywords: play therapy, self-esteem, cognitive-behavioral approach, working memory, hearing-speech disorder.

Introduction

All humans need skills to communicate effectively with others, including cognitive and social skills. This communication is satisfactory if it is two-way and the ability to respond appropriately to others is created. Children with hearing and speech disorders are born with limitations and because they cannot understand and receive the stimuli that normal children receive, therefore they have more problems in communication than their peers (Velizadeh et al., 2014). One of the cognitive skills is working memory or active memory, which if we want to give a simple definition of it, it is the processing and accumulation of simple information and its use in complex tasks (Sheikh Al-Islami et al., 2016). Children with hearing impairment include deaf children or hard of hearing children. These children have problems in communication and learning due to their language deficiency, which causes disruption in their social communication with others (Hashem & Peyman Nia, 2013). Also, these children realize that they are different from their peers and this causes their self-esteem to decrease, after that they feel lonely and begin isolation and withdrawal. We know that self-esteem is the image that every person has of himself and it is the attitude of a person towards his values. Research has proven that self-esteem is one of the important factors of communication. Reclusive and lonely people are more exposed to physical and mental diseases, if these diseases can be prevented by increasing self-esteem (Meshki et al., 2000).

Cognitive behavioral game therapy is a type of psychological intervention. Just as an adult in psychotherapy vents by talking and finds a solution, the child expresses his feelings through play therapy and learns skills that can achieve satisfactory problem solving, reasoning and communication skills. (Bakhshaiish & Mirhosseini, 2013).

Play is a child's language therapy and allows him to communicate with his friends without words. Therefore, according to the theoretical foundations presented. The present study seeks to investigate that:

Is the effectiveness of play therapy based on the cognitive-behavioral approach on self-esteem and working memory of children with hearing and speech disorders significant?

Method

The current research is a quasi-experimental type of research. The statistical population of the research is all people (girls and boys) with hearing-speech impairment aged 8 to 12 years, who formed Tabasom rehabilitation center in Falavarjan city in 2021-22. Sampling included 30 boys and girls with hearing and speech disorders who were selected as convenience sampling and were placed in two groups of 15 people, experimental and control group. Also, analysis of variance with repeated measurements and Bonferroni's post hoc test were used to analyze the data.

Results

The findings showed that the average score of active memory (inverted digits) and self-esteem after game therapy in the experimental and control groups had a significant difference ($P < 0.05$). The score of self-esteem and active memory (inverted numbers) in the experimental group was higher than the control group ($P < 0.05$). There was no significant difference in the mean of active memory score (forward digit span) after game therapy in the experimental and control groups ($P < 0.05$).

Conclusion

The results of the present study showed that play therapy with a cognitive-behavioral approach is effective on self-esteem and active memory (recitation of backward digits) of children with speech and hearing impairment, but not on active memory (recitation of forward digits) of these children. Therefore, intervention with play therapy can prevent the negative consequences of children's speech and hearing problems due to lack of skills, and even education in the field of play therapy increases the self-esteem and active memory of these children. It causes these children to be in the community and have enough skills to communicate with others and progress in family, academic, social, etc. relationships.

Therefore, it is suggested to carry out this research on boys and girls in other regions and cities, and to carry out the follow-up test at reasonable intervals after the completion of the training sessions. Considering that cognitive-behavioral play therapy training is recommended to the psychologists in order to confirm the results of the experiment, the implementation of the experiment on boys and girls in other regions. Implementation of the follow-up test at reasonable intervals after the completion of the training sessions and considering that cognitive behavioral game therapy training has led to an increase in self-esteem in children with hearing-speech disorders. Therefore, it is suggested to be investigated in other groups of children with special needs (asperger's, mentally disabled and blind...). Also, the number of sessions should be increased and the interval of sessions should be shortened, so that its effectiveness compared to short-term trainings should be determined. Cognitive-behavioral game therapy can be used practically in clinics, exceptional schools and rehabilitation centers and increase the performance of these children. This research, like other researches, was faced with limitations and problems that should be taken into account in the application of the findings. Among these limitations, we can point out the following that the research findings have limited generalizability and most likely will not be suitable for another society. In this research, the follow-up test was not used, basically, to evaluate the long-term effect of the interventions, the presence of follow-up tests seems necessary, because the follow-up periods provide a more accurate indicator of the improvement status of people in order to stabilize and continue the improvement. He also pointed out that the statistical population was limited to 30 people, as well as the lack of research and study resources in the field of cognitive-behavioral play therapy and active memory in children with hearing and speech disorders.

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