



The Effectiveness of Cognitive Behavioral Group Training Approach On Mothers' Autistic Children in Hamedan Primary School Students On Aggression in These Students

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Abstract: Objective: The study designed to examine the effectiveness of cognitive behavioral group training approach on mothers with autistic children in Hamedan primary school students on aggression in these student in the 2012-2013 school year. **Methods:** This study is quasi-experimental design with pre-test - post-test and control group. Population of the study is all the autistic elementary school students in Hamedan. The sample size was 30 patients. Using random sampling, individuals were targeted. Participants in the training group cognitive-behavioral approach, were women. This utility-scale aggression in preschool children (pcas) the test and control groups were completed by mothers. Statistical analysis of data, descriptive and inferential statistics were used in the software environment SPSS18. **Results:** results showed that cognitive behavioral group training approach has been effective in reducing aggression among students and it has impact on meeting the aggressive pursuit of stability. **Conclusion:** according to the benefits of parent training on reducing maladaptive behaviors in autistic student, it is recommended alongside other conventional teaching approach in the field of autism to be taught to mothers.

Keywords: cognitive-behavioral approach, aggressive, autistic students

INTRODUCTION

Family is the oldest social institution since the dawn of mankind and is considered one of the main foundations of human life (Mousavi, 2004). A healthy society is dependent on a healthy and happy family. A perfect family should be a safe, sturdy and friendly environment for everyone, because it provides comfort and support for family members (Garrosie, 2004). The root of a lot of suffering, sorrow and pain of people is deeply embedded in their family relations (Asgari, 2001). The family has a very important role in the behavior, attitudes and character formation of children. In families with troubled children, this role is very specific and significant, because in families with autistic or troubled children, daily confrontation of family members with

the children's problems could largely destroy the family's welfare and security and negative feedbacks to the child's family lead to the formation of negative behaviors in them (Journal of Exceptional Education, 2007). Family system theory suggests that individual problems are partly stemmed from family problems and cognitive-behavioral therapy believes that the behaviors and beliefs of family members play a significant part in creating these problems as a stimulus or effective event affecting them (Bahrami, 1997). Children's emotional and behavioral problems which are the inevitable result of poverty, disease, ignorance and abuse, chaotic families and shortcomings, cause problems for many adults with autism in their verbal and nonverbal communication, social interaction and activities related to the play. The disorder makes it hard for children to communicate with others and relate to the outside world. Annoying and aggressive behaviors are also seen in some cases. In these individuals, repetitive movements (hand flapping, jumping), unusual responses to people, attachment to objects or resistance to change are also noted and may also have some unusual sensitivities in their five senses (visual, auditory, tactile, olfactory and gustatory). Communication disorder is the core of autism spectrum disorder (Lihy, 2000). Aggressive behaviors are common among destructive behaviors in autistic people (Ranik, 2008, translated by Alaghebandrad and Farhi, 2011). Aggression is defined as behavior that is intended to harm another or self. In this definition, person's intentional behavior is very important. Aggression is the behavior aimed at deliberate intent to hurt others or themselves (Karimi, 2002). Aggression can be used for describing a set of exogenous behaviors characterized by violating other people's rights of the society and disturbing effect of this behavior. Aggressive acts include physical and verbal behaviors such as threats, insult, verbal dispute as well as destruction of property (Atkinson et al., 2000, translated by Baraheni et al., 2002). From the perspective of Aronson (Bita, translated by Shekarshekan, 2008), aggression is a conscious act aimed at acts of physical or mental suffering. In other words, aggression is an intentional act but not meant to cause harm. This harm may be physical or verbal. In addition, aggression is physical or verbal behavior aimed to harm person or object or system, causing others to avoid or retaliate against them (Sadok and Sadok, 2003). In autistic people, these aggressive behaviors include assaulting, hitting, biting body, throwing accessible objects at people or breaking them, frequent screaming leading to annoy, pushing people or objects and so on (Reineck, 2008, translated by Alaghebandrad & Farhi, 2011). Several studies suggest that aggressive children are basically rejected by their peers. They have poor academic performance and are subject to expulsion from school. These outcomes were reported in North and South America, Asia and Europe (Charisa and Park, 2006, quoted by Ghaderi et al., 2006). A review of literature regarding the roots to the children's problems suggests the relationship between domestic violence and aggression in children, which is quite consistent with social learning theory. Children imitate the violent and aggressive acts of their surroundings and imitate it. Children might imitate aggressive or violent behavior that they see in their life in relation to caregivers or parents; they might likely to imitate them. Teacher training and parents on how to deal with children are among the psychological therapies for the treatment of aggression, which a lot of research has been conducted on it (Howard, 1998, quoted by Ghaderi et al., 2006). Cognitive-behavioral training is among one of these

trainings. CBT is based on the belief that thought distortions and maladaptive behaviors can cause maladaptive feelings or exacerbate them (Leahy & Holland, translated by Dehghan, 2006). Cognitive behavioral approach is one of the most complete approaches based on the principles of cognitive learning. Cognitive behavioral approach focuses on the individual thoughts, feelings, and behaviours in the family system. It is believed that negative thoughts lead to inconsistent or incompatible interactions with people (Peterson, 1978; quoted by Rajabi, Pooshneh & Gobrie, 2009). Cognitive behavioral therapy is one of the most common techniques for children with behavioral disorders which has wide applications, where parents have to change their attitude toward behavioral problems; it will help them change their undesirable behavior effectively (Ferric et al., 2003; quoted by Gholamzadeh, 2012). In Germany, Prabest (2003) investigated 24 parents and 23 autistic children with an average age of 8 years and 9 months during 3 days of group parent training; he came to the conclusion that the group parent training has positive effects on everyday interactions of children and parents and parents reported they were very satisfied with the program. In a pilot study with parents of autistic children, Hall and Graf (2010) interviewed with parents about their problems and concerns with autistic children. The results indicated the need and willingness of parents to receive information about autism and their need for support resources. Mac Kanachy et al., (2007) reviewed the research on autistic children 1 to 6 years old and came to the conclusion that calm and peaceful parents can have influence on autistic children. Rabiie and Shahrivar (2007) in a study on 12 parents of autistic children admitted to Roozbeh Hospital, Tehran, came to the conclusion that group parent training for parents increased the awareness of their children's illness and provided some techniques to help and treat them. Novak et al. (2008) summarized 55 studies about the impact of parental training programs for autistic children and came to the conclusion that these programs have led to significant positive changes in parenting skills and child's behavioral problem. Drew (2002) and their colleagues conducted a 23-month parental training program for 24 autistic children. 12 months later, the children were re-examined and it was concluded that these children had better language skills and communication development compared to the control group. Training interventions for psychiatric disorders for parents were implemented in Iran and some of these studies were also published, including parent training programs related to more active or less attentive children, children with anxiety disorders and children with behavioral problems. The results revealed that these methods and techniques were effective in reducing the symptoms of children, improving performance and communication between parents and family members, reducing levels of anxiety, depression and parenting stress. However, little research had been published regarding the parent training for autistic children. By taking into account international research results, long-term outcome for children with autism and costly individual sessions, the need for parent training programs for the treatment of autistic children should be increased (Rabiie & Shahrivar, 2007). Given that cognitive behavioral approach to parental training has a significant impact on the behavior of children; therefore, in this study we tried to answer the question: does cognitive-behavioral approach group training of mothers with autistic children have any impact on decreasing aggression in these children in elementary school in Hamadan?

Method

This is a quasi-experimental study with pretest-posttest design and control group. The population of this research comprised of all the mothers of autistic children in primary schools in Hamadan, receiving educational services, training and rehabilitation in autism school. This study used purposive sampling. All the students (n = 60) (girls =36 and boys =24) were evaluated and based on observations, interviews with instructors and assessment tools, 34 students with more aggression and less visual communication (girls =20 and boys =14) were nonrandomly selected as sample. 4 mothers of the students were unwilling to participate in the training program. Because of this, the researcher selected 30 mothers (girl's mothers = 18 and boy's mothers =12) as sample; they were randomly assigned into 2 groups: control (n = 15) and experimental group (n = 15). It should be noted that each group consisted of 9 girl's mothers and 6 boy's mothers; the number of girls and boys in both groups were equal. Cognitive-behavioral group training approach was applied for 10 sessions for 90-minute a week for the experimental group, but the control group did not receive any training. At the end of the training, the tests were administered on each group and after a month of training, follow-up tests were performed on both groups to assess long lasting effect of training.

Tool

In order to achieve the goal of the study, preschool children aggression scale (pcas) was used. This scale has 43 items with Likert rating scale to assess physical, relational, verbal and reactive aggression in preschool children. This scale was firstly developed by Vahedi, Fathi-Azar, Hosseini-Nasab, and Moghadam (2008) by using Aggression Questionnaire for primary school children (Shahim) and Aggression Questionnaire (Ahvaz) to measure different aspects of aggression in preschool children. The scale which is filled out by the teacher or parent includes a total score and four subscales: a) verbal-offensive), b) physical-offensive, c) relational, d) impulsive aggression. This questionnaire is scored on a 5-point Likert scale: 0 = never, 1 = rarely, 2 = once a month, once a week = 3, most days = 4. Each subscale score is obtained from the sum of the items and the total score is the sum of all the subscales. Based on this questionnaire, cut-off point for the selection of aggressive persons is calculated two standard deviations higher than average. Cronbach's alpha coefficient for reliability of the whole scale was obtained 98.0% and for four verbal-offensive, physical-offensive, relational-impulsive aggressions was obtained 93.0%, 92.0%, 94.0% and 88.0%, respectively. In this scale, high score indicates high levels of aggression in children (Rajabpour, Makvand Hosseini & Rafienia, 2011). In this study, the questionnaire is completed by the mothers of students for 10 to 15 minutes.

Table 1: A summary of curriculum and process of sessions

Sessions	Description the purposes of process during each session for 90 minutes.
First	Referral and getting familiarity with members of the group, explaining the plan objectives and desired changes, familiarity of mothers with autistic disorder

Second	Exploring mother’s maladaptive thoughts about autism and their familiarity with the correct thoughts and beliefs
Third	Exploring parent-child interactions and attention to false beliefs and behaviors of mothers, their familiarity with the correct beliefs and behaviors
Fourth	Getting familiarity and how to deal with children with autism, identifying and categorizing of their beliefs about their child's weaknesses.
Fifth	Understanding the problem-solving skills and attention to the effect of positive beliefs in changing the behavior of children with autism
Sixth	Familiarity of mothers with intervention program for modifying their child's behavior and training to change false beliefs
Seventh	Benefit analysis of positive beliefs and the effects of negative beliefs in the treatment, understanding the general principles of treatment and behavior change in children
Eighth	Reasonable and accurate and clear analysis of beliefs be, the newer the myths surrounding the children's mothers and getting start to change the false beliefs of mothers about their children
Ninth	Strengthening the opposite beliefs, false beliefs and perception of the situation with a positive attitude, familiarity with management strategies for child behavior
Tenth	Evaluation of the results of the sessions, the implementation of the post-test

Findings

Table 2: Data on aggression scores

Aggression		Number	Mean	SD	Percent
control	Pretest	15	102.73	12.67	59.72
	Posttest	15	102.66	11.03	59.68
experimental	Pretest	15	97.46	22.88	56.66
	Posttest	15	86.33	20.36	50.19

The above table shows that the average score of pre-test and post-test in the control group was 102.73% and 102.66%, showing no significant difference in both groups, while in the experimental group, the mean scores were decreased from 97.46% to 86.36% in the pre-test and post-test, respectively. The results are indicative of the fact that the level of aggression in autistic children after administering the cognitive-behavioral approach group training among mothers has been reduced.

Table 3: Data on aggression scores by gender

Aggression		Number	Mean	SD	Percent
Boy	Pretest	2	103.91	16.51	60.41
	Posttest	18	99.58	13	57.89
Girl	Pretest	12	97.55	19.54	56.71
	Posttest	18	91.11	20.4	52.97

The above table shows that the average pre-test and post-test score of boys were 103. 91 and 99.58, respectively, which represents reduced aggression among them. In addition, scores of girls have decreased from 97.55 to 9.11 in the pre-test and post-test. The results are indicative of the fact that the level of aggression in both pre-test and post-test among boys was better than the girls and after administrating the cognitive behavioral group training of women, the greatest reduction has occurred among girls.

Table 4: Data on scores of aggression

Dimensions of aggression			Mean	SD
Verbal-offensive	Experimental	Pretest	49.93	8.16
		Posttest	37.66	6.83
	Control	Pretest	43.4	5.62
		Posttest	43.26	5.4
Physical-offensive	Experimental	Pretest	31.37	6.49
		Posttest	29.2	6.2
	Control	Pretest	33	3.54
		Posttest	34	3.94
Relational	Experimental	Pretest	20	5.05
		Posttest	16.86	4.48
	Control	Pretest	21	3.77

		Posttest	20.6	3.88
Impulsive	Experimental	Pretest	20	5.06
		Posttest	15.93	4.04
	Control	Pretest	20.93	4.26
		Posttest	20.94	3.78

The table above indicates that the maximum and minimum changes in test scores of dimensions of aggression in the posttest and in the experimental group are related to verbal –offensive and relational aggression components, respectively.

Table 5: Analysis of variance in the first hypothesis of research

	SS	df	MS	F	P
Modified model	7643.586	3	2547.862	36.52	0.000
Width of the Source	472.647	1	472.467	6.772	0.000
Aggression	3437.753	1	3437.753	49.276	0.015
Gender	172.575	1	172.575	2.474	0.000
Group	1183.839	1	1183.839	16.969	0.028
Error	1813.914	26	69.766		0.000
Total	277365	30			
Modified Total	9457.5	29			
Adjusted R ²	0.808		Adjusted R ²	0.786	

The adjusted R² shows that approximately 79% of change in the dependent variable was due to changes in the independent variable. Also, since the significance level obtained for modified model is less than 05.0%, the explained model is acceptable with a confidence level of 95%. Furthermore, the F statistical significance level achieved in aggression variable is less than 05.0%, then, there is a relationship between the dependent variable and the random variable. Moreover, since the significance level obtained for the adjusted variable of gender is less than 05.0%, we can say that gender variable is associated with aggression, so that, according to Table 3, general aggression among boys is higher than girls. Covariance analysis which was to test the first hypothesis of the study presented in Table 21-4 suggests that cognitive-behavioral group training approach is effective on the mother’s aggression in autistic children based on gender ($F_{(1,30)} = 16.969, P < 0.05$). Table 6 describes the

differences between post-test scores in the experimental group and follow-up aggression variable using paired t test.

Table 6: Difference between post-test and follow-up aggression scores

	Mean	T-statistic	df	significance level
Aggression during posttest	86.33	14.79	14	615%
Aggression during Follow-up	83.91			

As it is clear, the achieved significance level is greater than 05.0%. In fact, we can say that there is no significant difference in post-test scores in the experimental group and follow-up scores on aggression variable.

Discussion and conclusion:

Cognitive behavioral approach training to parent was effective on many aspects of maladaptive behaviors of children particularly in autistic children. According to Hall and Graphs, parents need and tend to get information about autism disorder. In this study, the researcher has tried to give answers to the question: does cognitive-behavioral approach group training of mothers with autistic children have any impact on decreasing aggression in these children in elementary school in Hamadan? Regarding the effectiveness of a cognitive-behavioral approach to aggression in mothers of autistic children, findings show that cognitive behavioral group training approach is able to reduce aggressive behavior of mothers in autistic children in the experimental group compared to the control group. In this study, cognitive-behavioral training approach increased knowledge and awareness of mothers about autism and changed behaviors of autistic mothers resulting in the reduction of aggressive behavior in these students. This finding is consistent with results of the study by Rabii and Shahrivar (2007), showing that group training program to parents of autistic children increased awareness of parents and helped treatment of these children. On the other hand, it can be inferred that cognitive behavioral approach is effective on the false beliefs and behaviors of mothers with autistic children including physical punishment and blaming of autistic children for maladaptive and aggressive behaviors and modified their false belief that autistic children are unlovable and aggressive. This approach helped mothers to comprehend all the characteristics and difficulties of their autistic children and made them aware that aggressive behavior is a common problem and characteristics of children with autism and it is the way they respond to failure and environmental pressures, especially family environment. With awareness of the consequences of behavior and false beliefs of mothers with autistic children, the cognitive-behavioral approach helped mothers apply the constructive strategies on aggression in children with autism instead of

negative attitudes, which lead to more aggressive behaviors in these children. Understanding all the characteristics and behaviors of children with autism and changing false thoughts and beliefs of mothers, as well as awareness of the consequences and emotions and negative feelings and thoughts towards them and using proper methods of punishment and blaming and criticism were influential in decreasing aggression in these children. Children imitate the violent and aggressive acts of their surroundings and imitate it, an outcome which has been emphasized within the social learning theory. Therefore, given the decreased aggression after administration of mother training program, it can be concluded that the results of this study are consistent with results of Novak et al. (2008), Drew (2002) and Mac Kanachy (2007) showing that parent training programs are effective in helping children with autism to correct their improper behavior. As a result, we can say that cognitive-behavioral group training approach for mothers have a significant effect on aggression in autistic students in elementary school in Hamadan; The results of follow-up test even after one month suggested that training cognitive-behavioral approach had long lasting effect for the treatment of children with autism.

Limitations of the study:

This study was conducted with a small statistical population and the training course was firstly implemented for a short time for mothers of autistic children. The results should be generalized with caution and with further research and the use of larger samples is recommended to reach more reliable conclusions.

Recommendations

To better generalize the results, further studies with larger sample sizes and different age groups are proposed. Cognitive behavioral approach should be trained to all family members of autistic children and school teachers in order to obtain better results for correcting undesirable behaviors in autistic students.

Notes:

1- Arenson

2- Ranick

3- Chrise & Park

4-Howard

5- Leahy

6-Holland

7-Petterson

8-Frick

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