

The effectiveness of positive parenting skills training group for parents of children with attention deficit disorder- hyperactivity on behavior disorders in their children

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Abstract

Recent years have witnessed increasing problems of parents of children affected with disorder in different fields. The aim of this article is to determine the effectiveness of group training of positive parenting of children affected with attention deficit hyperactivity disorder (ADHD). The current research is of quasi-experimental and of pre and post test type of study. In this study, 46 children with attention deficit hyperactivity disorder which referred to occupational therapy centers in Tehran, were randomly selected as the two groups of experiment and control. In addition to drug therapy and occupational therapy programs, mothers of those children received eight (2h) sessions of group training of positive parenting program and the control group did not receive the training. A post-test are performed on both of the groups after the completion. Demographic information and 48-questions (questionnaire of Conners classification scale of parents) are used and the data used by ANCOVA are applied. To review the test assumptions, covariance analysis test is used and the data are analyzed by SPSS software. The average scores of behavioral disorders decreased in post-test of related experimental group, which indicates that group training program of Sanders parenting impact, is positive. ($F=5247$, $\text{sig}< 0.005$). Hence, this model is recommended to be used as one of the training patterns to the parents to reduce behavioral disorders of ADHD children.

Keywords: hyperactivity disorder-attention deficit, behavioral disorders, positive parenting, Saunders.

Introduction

Attention-hyperactivity deficit disorder is the most common neurological-behavioral disorder in childhood (Wilens, 2004b). Prevalence of this disorder in Iranian children reported to be in the range of 3-6 percent (Khoshabi & Pouretamad, 2002) and this included 33% of mental patients referred to occupational therapy centers in Iran (Behnia, 2002). This disorder is categorized as the three main forms, which include the type of pulsed hyperactivity without little attention, the type of little attention without hyperactivity and combined type (Sadock & Sadock, 2000). The most common treatment for ADHD children is drug therapy, as 75% of them are treated with stimulant drugs (Rowland *et al.*, 2002). One of the non-pharmacological and socio-psychological interventions which proved as the highest factor affecting in reducing behavioral disorders of ADHD children is parental education, including parenting behavior training (Pelham & Hoza, 1996). Positive parenting program is one of a variety of management education programs for children that are run for parents. The program, a multilevel one and based on preventive strategies and for creating guidelines to support the families has been created by Saunders *et al.* (Sanders, 2003). Positive parenting program is behavioral family intervention which are based on social learning principles (Sanders, 2003). This kind of approach to treat and prevent childhood disorders, compared to other interventions, particularly in

the field of children's conduct problems, has had the strongest empirical support (Sanders *et al.*, 2003).

This program is used for parents of children aged 2 to 12 years and has five levels, which the intensity of intervention is increased by approaching higher levels (Sanders *et al.*, 2003). The rationale for grading this program is the existence of different levels of disorders in performance and behavior of children as well as different requirements of their parents (in terms of type, severity and assistance method) (Kazdin *et al.*, 2005). The aim of this program is to increase family support factors and decrease risk factors associated with severe emotional and behavioral problems in children and adolescents. Specifically, the program trains positive management skills as a replacement for frustrated and ineffective child rearing methods to parents. Although the drug actually is effective in reducing the ADHD signs, social interactions is the only combinational therapy (medication+ behavioral therapy and parental education) that promote social skills and works in the framework and scope of behaviors and improving child-parent relationships (Chronis *et al.*, 2007). According to the studies of Beck *et al.* it is shown that the mothers whose children had more degree of active tension had clearly more tensions than the mothers of children who have been chronically experienced less degree of active tension (Beck, 2007). According to Posterman and Firestone (1992) the tension of younger

children's mothers is higher than that of older children's mothers. One of the structures of parenting stress which affects on the parent's behavior is the attribution of parents towards the child behavior. Sonuga *et al.* (2001) found out that mothers whose children have ADHD have less expectations about their children's growth and improvement than the mothers whose children have no problem. In spite of the fact that the children have been reached to the same level of IQ, these differences suggest that either mothers underestimates their children's abilities or children act less than their actual abilities, which in every case it would be important in the course of this disorder.

Regarding the contents noted and the importance of further research in these areas, the following research hypothesis is developed and tested: Teaching positive group parenting for parents of children aged 4-10 affected with attention deficit-hyperactivity is effective on behavioral disorders of their children.

Method

The present study is quasi-experimental and is pre test-post test type of control group. In this research, data collection tools were the Conners questionnaire, which is a 48 questions form (CPRS_48) of parents. These experimental and standardized questionnaires is the revised and short form of the 93 questions (Conners *et al.*, 1999) that has the reliability trial between 70-90 percent. Test validity of this questionnaire is the Cronbach's alpha coefficient of $\alpha=0.93$ that this scale has an average equals to 21/44 and standard deviation of 16/38 (Khoshabi & Pouretmad, 1381), which deals with the child behavior based on 4 grades of "behavioral problems", "psychosomatic problems", "learning difficulties", "Problems of impulsivity - hyperactivity", "anxiety problems" and "Hyperactivity Index".

In order to collect data, seven occupational therapy centers were firstly referred that was ready to cooperate with the researcher. CPRS questionnaire, which is a demographic questionnaire, was given to eligible clients who present early in the study. Then, from those of children whose parents had a higher behavioral disorder score considered in cut point based on CPRS questionnaire were chosen. Subsequently, all eligible parents with regard to matched matching according to demographic data and randomly were divided into two equal groups of 23 control and intervention players. Before the application of intervention and within a week, Conners questionnaire of parent scale was scattered among all the mothers of the two groups, which organized

Table 1. Mean and SD scores of the testable scores of the two groups in two steps of applying the test

Group	Test		Control	
	Mean	Std. Deviation	Mean	Std. Deviation
Pre-Test	5.30642	64.6087	9.09654	66.7391
Post-Test	5.82485	62.7391	4.46860	55.1739

the pre-test information. After the application of intervention lasted overall 8 weeks, mothers completed the intervention and control group questionnaire, and the data collected formed the asked CPRS, and the results received were considered as post-test questionnaire.

Experimental Intervention

Experimental intervention was carried out in 8 sessions for the group tested as follows. Meanwhile, one session was hold for one week.

Session one: ADHD recognition, knowing the factors affecting children's behavior and parent's familiarity with positive behavior methods.

Session two: the methods to improve and enhance the parent-child relationships according to the time allocated and quality, verbal and non-verbal expression of love, offering advice and reinforce positive self-concept of new skills and techniques to children.

Session three: introducing types of amplifiers, the methods to increase attention and the desired behaviors thorough the presentation of attention techniques, verbal praise, points, attractive activities and concrete rewards, and using token economic system and behavior chart.

Session four: Introducing unwanted effects of punishment, Tips needed for effective use of punishment, legislation practices and procedures relating to intervention and behavioral modification to reduce undesirable behaviors and behavior modifications of parents.

Session five: introducing bothersome situations and methods of planning and preparation to deal effectively with them to parents.

Session six: Introducing barriers to change and coping with them and practical exercises on common problems for parents

Sessions seven and eight: basic training on concepts and definitions of sensory phase and basic games and trainings of sensory integration.

Data obtained from the implementation of research were analyzed using descriptive statistics (mean, SD), and MANCOVA inferential statistics and using SPSS 16 software.

Findings: To review research hypotheses based on the ((child rearing group training for parents of children aged 4 to 10 with attention deficit disorder - hyperactivity on behavior disorders affect children)), the multivariate analysis of covariance was used.

As can be seen in Table 1, after the adjustment, the experimental group scores on post-test was 55.17, which a less average gained in post-test stage.

For considering whether this point is significant or not, and also whether the loss caused by the independent variable (group training of rearing to children's parents), Mancova analysis was performed with the correct Benefroni, which the results of Table 2 and 3 are given.

Table 2. The results of Covariance analysis for the variable behavior disorders

Dependent Variable	Source	TS of SS	DF	MS	F	Sig.	ES
Post-test of Behavioral Disorders	Corrected Model	658.174	1	658.174	24.423	0.000	0.357
Post-test of Behavioral Disorders	Intercept	159890.087	1	159890.087	5933	0.000	0.993
Post-test of Behavioral Disorders	Group	658.174	1	658.174	24.423	0.000	0.357
Post-test of Behavioral Disorders	Error	1185.739	44	26.949			
Post-test of Behavioral Disorders	Total	161734.000	46				

In Table 2, Benefroni alpha (0.00) is used, and by considering the calculated F ($P < 0.0005$ and $F(1,44) = 24.42$), and because the significant level is less than Benefroni alpha (F factor is significant), it can be said that behavioral disorder scores in the two pre-test stages have significant differences and the observed decrease is significant in post-test stage. Based on the data of Table 6, we also analyze whether this difference and the related decrease in post-test stage, is because of group training to children's parents or not.

As shown in Table 3, group training on child rearing for parents whose children were aged 4 to 10 with attention deficit disorder - hyperactivity on child behavior disorders had a significant effect ($F = 5247, \text{Sig} < 0.005$). This means that, group training for parents on child rearing (children aged 4 to 10 with ADHD attention deficit-hyperactivity disorder) was effective. Chi Eta (0.996) part of this work strongly suggests that the effect is very high. Therefore, the hypothesis of this study is approved.

Table 3. Multivariate analysis of variance for behavioral disorders

	Partial eta	Sig	DF	F	value
Pillai's Trace	0.996	0.000	2	5247	0.996
Wilks' Lambda	0.996	0.000	2	5247	0.004
Hotelling's Trace	0.996	0.000	2	5247	244.049
Roy's Largest Root	0.996	0.000	2	5247	244.049

Results and discussion

Family is a unit of social system that any impairment in its members can disrupt the entire system, and this disrupted system in turn exacerbates the disturbances related to members and will create new problems. It can easily be imagined that several aspects of behavioral disorders such as ADHD can leads to maternal depression, anxiety and feeling of limited role of parents, the sense of demerit in the child's education, poor emotional dependence between parent and child, more negative relationships of children to their brothers and sisters, higher levels of stress in families, higher divorce rates and disorganization of family relationships in families of ADHD children.

The results of Zargarinejad and Yekeyazdandout (2007) studies suggested that parental education is effective in reducing behavioral problems, but it has no effect on hyperactivity, impulsivity, learning subscales of these ADHD children. Also, for example, Horen *et al.* (1998) divided 96 mothers into 4 groups. These four groups include the expectation one (which was monitored on and no therapy intervention was made upon them), drug therapy groups, parent education groups, and

combinational therapy groups (education and drug therapy), respectively. At the end of nine-month periods of study, the result suggests that the cure rate or reduction in behavioral problems in expectation groups, drug therapy groups, training group and combination therapy groups were not different from each other. On the other hand, Barkley and colleagues (1990) divided 158 mothers who have ADHD children into four groups of parent education, implementation of interventions in schools, combinational groups (including parent education and school interventions) and expectation groups. These results indicate that after two years of follow up, there were no significant differences observed between children's behavioral problems of training and control groups. Although the combination therapy group showed significant superiority in terms of recovery rates of behavioral problems than other groups, that these results are consistent with results obtained in this study.

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