Original Article

Cognitive Behavioral Stress Management program and mothers of children with Oppositional Defiant Disorder

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Objectives: Present study is designed to investigate the effect of stress management training by using cognitive behavioral method on stress of mothers of children with Oppositional Defiant Disorder.

Methods: The study was done in a quasi-experiment designed as pre-post-test with control group. The participants were 20 mothers of oppositional defiant disorder children, ages from 4 to7 years old. They were randomized to experimental (n=10) and control (n=10) groups. The experimental group trained stress management program with method of cognitive-behavioral during 10 sessions, once a week. During this period, the control group did not receive any intervention. Both groups were assessed by Parental Stress Index in pretest and posttest. Data were analyzed by analysis of covariance.

Results: Findings indicated that a significant difference between the mean of stress of two groups in posttest in both child and parent domains and the stress scores were significantly decreased in experimental group after intervention.

Discussion: Regarding to the positive effects of stress management by using cognitive-behavioral method can be suggested as an effective method for mothers with Oppositional Defiant Disorder children to reduce their stress and control their child' behavior.

Keywords: Stress Management; Cognitive-Behavioral Method; Oppositional Defiant Disorder

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Introduction

Due to the vast improvements that have occurred in morbid psychology and much attention is given to childhood disorders and many studies have been done in this area. In these studies, the prevalence of childhood disorders is estimated to be between 6 to 19 percent (1). Inappropriate behavior and insubordination are common causes of referrals to clinics and counseling psychology and its prevalence is 2 to 16 percent in children of preschool or early school age and preadolescence. Oppositional Defiant Disorder (ODD) is a recurrent pattern of negative behaviors conservative, disobedience, defiance and hostility against those powers that covered a broad impact on the individual, family, school and society (2).

The causes of this disorder are controversial, but research suggests that the most influential factor in Oppositional Defiant Disorder is parents 'behavior with their child (3). All children have a level of behavior problems that will change over time as the child grows But in previous years of school due to the ongoing interaction of parents with children in school, what is the greatest impact on this change, is a parenting skills (4) and the effects of these disorders on parental engagement - children, creating stress in the parenting. Stress the difficulties which modern civilized life in all its areas facing, when the activity is higher than of individual ability, provide responses that is called stress (5). Stress in terms of physical, emotional, cognitive and behavioral effects adversely on individual. Among the adverse effects of stress, disruption of social functions was important. Manifestations of social functions can be pointed interactions between parent and child (6). Children have a difficult relationship with their family member, family system is affected. Family can affect their members. Research shows that behavioral problems in children are associated with mental health problems of parents (7). Studies on the relationship between mental disorders in mothers of children with emotional and behavioral problems occurred, Identified mothers who had poor

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morale, they are feelings of helpless, anger and depression. These conditions can impact directly on children because Energy from mother transfer to child,since the depressed mother is not able to meet their child's needs, so this leads to behavioral problems in children (8).

Public Health Association Studies also showed Maternal anxiety during pregnancy can increase risk of a child developing attention deficit/ hyperactivity disorder and Oppositional Defiant Disorder and mother who are distressed in the last trimester of pregnancy, their child will develop behavioral problems (9). Studies have shown those mothers of children who are ODD feel less successful and effectiveness and more anger and depression than mothers of healthy children (10). The research was reported in educating parents of children with hyperactivity, reduce their stress and increase their self-esteem (11). Research on the role of parents in American children with behavioral problems were identified the role of parents, lifestyle, family conflicts, and maternal depression is effective in predicting behavior problems in children (12). Another study found that mothers of children with conduct disorder have high stress and experienced turmoil and hardship in all aspects of the parents function as role limitations, social isolation, depression and helplessness in marriage (13). Research suggests that familial factors as parents, especially the mother's mental health problems are important in the development and maintenance ODD in children (14). So with interventions that promote mental health of parents can be positive and concrete steps to eliminate or mitigate behavior problems of children and families. It is worth noting that the implementation of this kind of research is important and the results can provide appropriate solutions to health professionals.

The subject of stress management by using cognitive-behavioral method tends to be very important issue now a day, because it particularly affects function of family and relationship within the family members which might results to caught vicious cycle. Stress management increases the ability of individual in order to coping with stressful situation to reduce the level of stress. This method of intervention consist of elements such as raising awareness about stress, relaxation training, identifying inefficient thoughts, cognitive restructuring, problem solving, anger management, self-management and planning activities (15). Considering the fact that there exists a significant hiatus in the examination of parental stress and psychological distress among parents of children with ODD in Iran, present study investigates whether stress management training by using cognitive behavioral method reduces the anxiety and depression among mothers of children with ODD or not?

Methods

Present study is quasi-experiment designed as pre-test and post-test with control group. The sample is mother of ODD boys (4-7 years old) that the psychiatric diagnosis of children referred to Tavana Harekat rehabilitation center in Tehran. Participants were including 20 parents that were selected by cluster sampling and allocated randomly in experimental and control groups (10 parents for experimental group and 10 for control group). The groups were matched according to age, education, number of children and number of sessions was brought to the center for treatment. For sample size calculation, in humanities and social sciences research in theoretical and practical book for the study of causal comparative and experimental, is recommended at least 15 subjects per group (16). Given the sample size of the internal and external research in relation to stress management training and also limit the amount of people participating in training classes and for optimal results, a sample size was calculated 24 persons. After running the pre-test on the both groups, experimental group attended in stress management program by using cognitive-behavioral method and after intervention, test scores were collected. Program of stress management by using cognitive behavioral method includes 10 sessions of 90 minutes for 10 weeks in experimental groups was performed. During the training sessions, the control group did not receive the program. Two weeks after the training sessions, questionnaire was given to both groups as a post test. After 1 month of completion of the training sessions, follow-up study was carried out. Typically, each session included relaxation exercises and techniques of stress management. At the beginning of each sessions were reviewed the content of the last session, at the end was given assignments to practice at home.

Parental Stress Index was used in this study (13). It is a screening and diagnostic assessment technique designed to yield a measure of the relative magnitude of stress in the parent child system. The questionnaire has two main areas and 13 sub-scales. The test includes the following subscales: Child Domain Subscales (adaptability, acceptability of the child by parent, child demandingness, child mood, child distractibility/hyperactivity, child reinforces parent); and Parent Domain Subscales (parent

depression, parent attachment, restriction of role, parent sense of competence, social isolation, relationship with spouse, parental Health) (17). Life stress scale with 19 indicators measures the stress beyond relationship of parent child. Grading practices Likert method is based on responses from 1 to 5 (from totally agree to totally disagree). Validity Coefficient scale is reported as %93 by calculating Cronbach's alpha for the total scale of 248 people in a group of mothers in Hong Kong. The coefficients have been in the child area% 85, parent area% 91 (18). In another study, Validity Coefficient scale was %95 between 543 parents living in Virginia (18).

Analysis of covariance was used to compare the intervention. Control and experimental groups are as independent variables, post-test scores of child and parents domain are as dependent variables and pre-test of these are auxiliary variables.

Results

Table (1) shows that, due to the random selection of participants to experimental and control groups, there was no significant difference between the demographic variables of education, age level of parents and children and number of sessions (P > 0.05).

Table 1. Descriptive indicators related to demographic characteristics of the sample

variable	Statistical indicators		Experimental group	Control group	test	sig
Mother' Age	Mean(SD)		34.70(6.03)	33.70(3.59)	T=0.47	0.65
Child' age	Mean(SD)		6.10(0.87)	5.80(1.22)	T=0.62	0.53
sessions	Mean(SD)		2.50(1.43)	2.10 (0.99)	T=0.72	0.47
Education	Frequency(percent)	Diploma	3	4	Z= -0.38	0.70
		BA	6	5		
		MA	1	1		

Descriptive data, including means and standard deviations of stress within the parent and child between the experimental and control groups before and after the intervention program is in table (2). As indicated in the table, the mean of stress score in experimental group in both domains has reduced after intervention. (Child: from 143.80 to 134.40) (Parent: from 176.80 to 176.30).But the stress score of control group has not changed or even slightly increased. (Child: from 143.30 to 144.00) (Parent: from 176.30 to 177.30)

Table 2. Descriptive indices of stress scores in child and parent subscales

subscales	groups	Test phase	Mean	SD
child	experimental	pretest	143.80	6.94
		posttest	134.40	9.05
	control	pretest	143.30	7.64
		posttest	144.00	8.89
parent	experimental	pretest	176.80	10.30
		posttest	162.70	13.13
	control	pretest	176.30	9.48
		posttest	177.30	9.47

The main assumptions of this analysis such as equivalence of variance, normality of dependent variable scores, linear relationship between the dependent and the auxiliary variables, equality the slope of the regression line were evaluated and the results confirmed (table 3).

Table 3. Summarizes the results of multivariate tests subscale

test	value	f	df	sig	Partial Eta squared
Pillai' trace	0.78	26.89	15	0.001	0.78
Wilks lambda	0.21	26.89	15	0.001	0.78
Hotelling' s trace	3.58	26.89	15	0.001	0.78
Roy's largest root	3.58	26.89	15	0.001	0.78

Based on the above Table, the result of covariance analysis showed significant difference between control and experimental groups in at least one of the dependent variables. This means that with regard to potential differences in the pretest, the posttest scores of the two groups are different. To determine

whether these differences in means are due to a real difference or error and chance, the analysis of covariance was used. The results showed that there was a significant difference between the mean of stress of two groups (p=0.001). According to these, it can conclude that between the two groups is observed significant difference. Stress levels in the experimental group compared with the control group had a significant reduction after the intervention (table 4).

Table 4. Analysis of covariance for stress subscale scores (child, parent)

variable	source	Sum of square	df	Mean square	f	sig	Effect size
child	posttest	1137.44	1	1137.44	61.78	0.001	0.78
	group	513.86	1	513.86	27.91	0.001	0.62
	error	312.96	17	18.40			
parent	posttest	1868.76	1	1868.76	64.64	0.001	0.79
	group	1141.41	1	1141.41	39.48	0.001	0.70
	error	491.43	17	28.90			

Discussion

The results of this study have been proved that cognitive-behavioral stress management training reduces stress scores in both domain (child and parent) in experimental group comparing with control group, findings of this result are consistent with the results of the research study Baron (19), Keogh et al. (20), Vivian Khamis (21), Sheehy & Horan (22), Rohini (23). Findings of these researchers also indicated that stress management by using cognitive-behavioral method help people to deal with particular pressures in order to improve quality of their life. Jeffry S. Danforth showed that behavior management flow Chart improved parenting behavior, reduced maternal stress, and reduced oppositional child behavior (24). Dretzke J. and colleagues found that Parent training/education programs appear to be an effective and potentially cost-effective therapy for children with ODD (25).

Loeber, R., Burkley, J. D. investigated that oppositional defiant disorder can cause many problems for the child and his family, and the person may be at risk for more serious disorders in adulthood. (26) Various studies have identified many factors disorders, most notably are family variables, particularly the mother's mental problems (10) Thus, family-based interventions are effective methods for prevention of this disorder (9). Berg & colleagues underline nature of all problems based on social and interpersonal. Participation in those kinds of trainings give them chance to share their problems, understand problems of others, learn new ways to solve problems and learn constructive plans in order to cope with stress (27). Actually, this is kind of social support, emotional and informational support. Social support affect life satisfaction in two ways: first way is direct effect or general effect of social support on life satisfaction without considering the level of distress experienced by individual, it effects the life satisfaction, and second way consists of indirect effect or mediator effect that protect people in facing with stressful conditions (28).

The aim of the present study was to teach various ways in order to challenge with negative thoughts and attitudes associated with having a oppositional defiant disorder, and to reduce symptoms of stress and as a result improve and resolve impaired functions of activities, life satisfaction, self-esteem and social relationships. A similar study has not been done in Iran about improving maternal mental health problem of children with oppositional defiant disorder according to the stress management, thus therapies such as cognitive-behavioral therapy beside other methods seems to be necessary because those treatments can teach parents to learn how deal with their children in order to adapt their social situation.

Conclusion

In general, parental empowerment in education programs makes it better for parents to control their child's behavior and finally to reduce a lot of worry and stress associated with their child's condition. So, in further studies suggested that to use other methods of therapy and compare them with each other which have been proven that are effective in reducing stress of parents.

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