

Effect of Cognitive Behavior Group Therapy on Parenting Stress in Mothers of Children With Autism

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Background: Due to the various problems of children with autism, their families and especially their mothers become exposed to stress.

Objectives: This study aimed to evaluate the effect of cognitive behavior group therapy on parenting stress of mothers of children with autism.

Materials and Methods: The sample of this research consisted of sixteen mothers of children with autism. The measurement tools were the Abidin Parenting Stress questionnaire and a demographic questionnaire. The samples participated in seven sessions of cognitive behavior group therapy. The data were analyzed using the repeated measures test.

Results: The findings indicated significant differences between scores of pretest and posttest considering parenting stress ($P = 0.03$) and subscales of parenting distress ($P = 0.01$), yet there weren't significant differences in the other subscales ($P > 0.05$).

Conclusions: Cognitive behavior group therapy could be an important part of interventions used to decrease parenting stress of mothers of children with autism.

Keywords: Autistic Disorder; Child; Mothers; Parenting; Stress; Therapy

1. Background

Autistic disorder is a pervasive developmental disorder characterized by delay and deviance in the development of social, communicative and other skills, various motor mannerisms, resistance to change, and idiosyncratic interests and preoccupations (1).

Existing studies have reported that parents of children with autistic disorder had significantly lower level of mental health compared to parents of children without autism (2). They are hypersensitive and anxious, and often experience frustration, pessimism, and particular characteristics such as schizoid traits and higher traits of aloof (3-6). They also experience more marital distress and have conflicts with their non-disabled children (6).

Some studies found that parents of children with autism experience components of stress, such as decreased family cohesion, burnout and somatic complaints, more than parents of normal children or parents of children with other disabilities such as mental retardation or other developmental disabilities (7).

The parenting stress of families who have a child with a disability is an area that has been the subject of considerable research (8). Parenting stress is experienced by most parents, as such aversive feelings are associated with the

demands of the parenting role (9), however it has been reported that parents of children with autism and behavior disorders experience statistically and clinically higher levels of parenting stress than parents of children with Down syndrome or normal development (10). Osborne et al. (11) showed that parenting stress reduces the effectiveness of early teaching interventions for autistic spectrum disorders.

Considering the above-mentioned points, it is necessary to provide appropriate interventions to support families (especially mothers) with improving their coping abilities towards stress.

Cognitive behavioral therapy is an effective evidence-based psychological intervention for the improvement of some psychological and psychiatric problems (12). According to this approach, thoughts, emotions and behaviors and physiology are part of an integrated system. A change in any one component will be accompanied by changes in the other components. Thoughts can lead to emotions and behavior. Emotional disorders rooted in negatively biased thinking makes emotional disorders. Therefore people with emotional disorders can improve their mental health by changing such thinking patterns (which is assumed to be learnt) (13).

2. Objectives

The present study aimed to evaluate the effect of group cognitive behavior therapy on the parenting stress experienced by mothers of children with autism.

3. Materials and Methods

Mothers of children with autism who had attended the Behesht and Nahal education centers of Ahvaz were invited to participate in this study. Among the mothers who had volunteered to participate in this study, 20 met the inclusion criteria and received information about the aims of this research.

Inclusion criteria included level of education of high school graduation or higher, lack of any psychotic and major psychiatric disorder, and completion of the informed consent. The exclusion criteria included being absent for more than two sessions.

Psychological appraisal was done by a child and adolescent psychiatrist; a double-check appraisal was conducted by a clinical psychologist.

The subjects participated in seven 90-minute group cognitive behavior therapy sessions, on a weekly basis. The intervention plan designed by the authors was derived from the studies of Curwen et al. (13) and Hawton (14).

The intervention program was held at the Behesht education center, by a team consisting of two psychiatrists and one clinical psychologist. Four participants were excluded because of their absence in more than two sessions, and statistical analysis was done on 16 mothers.

3.1. Ethical Considerations

After explaining the procedure of the study, informed consent was obtained from the participants. The participants were allocated a code when they completed the questionnaire at the pretest and posttest stages.

3.2. Sessions of Group Cognitive Behavior Therapy

The intervention plan consisted of seven sessions for individual and group activities. Educational techniques such as role playing, group discussion and homework assignments were used.

3.2.1. Session 1

The researchers introduced the participants to each other, informed them about the attendance policy and their responsibilities. Helped participants become aware of their responsibility for personal change. Educated the subjects about their child's disorder and its effect on their family. Helped to alleviate the subject's distress through psycho education.

3.2.2. Session 2

A discussion about feelings was initiated and the subjects were asked to distinguish different emotions and

analyze the cost benefits of normal feelings and unhealthy feelings. Relaxation training was performed.

3.2.3. Session 3

The participants practiced relaxation, identified automatic thoughts and the link of automatic thoughts with emotions and behaviors. They were then asked to examine and question such thoughts and were helped to develop better alternatives.

3.2.4. Session 4

The participants practiced relaxation and discussed about cognitive errors. The researchers then helped the participants differentiate between such cognitive errors and develop more helpful alternatives.

3.2.5. Session 5

The participants practiced relaxation. The focus of the therapy was shifted from negative automatic thoughts to intermediate and core beliefs, with the aim to modify underlying beliefs.

3.2.6. Session 6

This session continued to work on beliefs.

3.2.7. Session 7

The researchers summarized what was learnt, and the participants practiced the skills they were taught in previous sessions, with emphasis on the application of main life, preparing subjects for setbacks and therapy termination.

The instruments used for gathering the data were as follows:

1. Demographic questionnaire,
2. Clinical interview based on DSM-IV-TR,
3. Parenting Stress-Short Form (PSI-SF): this is a 36-item questionnaire, which was presented by Abidin in 1995. It has three subscales including parental distress, parent-child dysfunctional interaction and difficult child. Fadaei et al. (15) investigate the factor structure, reliability and validity of the questionnaire among Tehran city's mothers with seven to twelve-year old children.

The results of Cronbach's alpha showed that the reliability quotients for parenting stress and each of the subscales of parental distress, parent-child dysfunctional interaction and difficult child were 0.90, 0.80, 0.84, and 0.80, respectively for the entire sample (these results for mothers of boys were 0.89, 0.80, 0.83, and 0.78 and mothers of girls 0.91, 0.80, 0.84, and 0.80). Test-retest reliability after 18 days showed a total score of 0.75, parental distress of 0.82, parent-child dysfunctional interaction of 0.73, and difficult child score of 0.71. Depression Anxiety Stress Scales (DASS) and the Child Behavior Checklist (CBCL) tests were used for evaluating the divergence and convergence. Fadaei et al. (15) extracted three factors (parental distress,

parent-child dysfunctional interaction and difficult child) by using factor analysis. They showed that PSI-SF has psychometric properties for utilization in psychological research and clinical diagnosis of mother's parenting stress.

The data analyzed using Independent samples t-test. To test normal distribution of variables, Kolmogorov-Smirnov analysis was performed. A probability level of 0.05 was accepted as statistically significant. The SPSS software, version 16, was used to analysis of data.

4. Results

The results of Levene's test showed that the data had a normal distribution. Therefore we used independent samples t-test as a parametric test to compare the scores of pretest and posttest stages.

The mean age plus standard division of children were 7.5 and 2.2, respectively. Three children were girls and

13 were boys.

The mean age of mothers was $37.7 (\pm 6.1)$. The frequencies of the participants' demographic features are listed in Table 1.

Mean, standard division, Minimum and maximum scores of parenting stress and its subscales have been shown in Table 2.

As shown in Table 2 there are significant differences between scores of pretest and posttest regarding parenting stress ($F=5.15, P=0.03$) and subscale of parenting distress ($F=8.64, P=0.01$). This means that the intervention decreased parenting stress and parenting distress of mothers at the posttest stage. However, the findings didn't indicate significant differences in posttest scores of other subscales when compared to the pretest ($P>0.05$). Therefore the intervention wasn't significantly effective on improving parent-child dysfunctional interaction and difficult child subscales.

Table 1. Frequencies of the Participants' Demographic Features^a

Feature	Frequency
Marital status	
Married	16 (100)
Divorced/widowed	0
Occupation status	
Yes	1 (6.2)
No	15 (93.7)
Level of education	
High school	7 (43.7)
Diploma	7 (43.7)
Bachelor	1 (6.2)
Post graduate	1 (6.2)

^a The values are presented as No. (%).

Table 2. Mean and Standard Deviation of Parental Stress and Its Subscales, and Results of Independent Samples T-Test ($n=16$)

Variable	Mean \pm SD	Sum of Squares	Mean Square	df	T	P Value
Parenting stress		338	338	1		0.03 ^a
Pretest	1.22 ± 11.37				5.15	
Posttest	1.16 ± 10.09				8.64	
Parental distress		128	128	1		0.01 ^a
Pretest	41.87 ± 6.07				0.34	
Posttest	37.87 ± 4.36				2.91	
Parent-child dysfunctional interaction		3.78	3.78	1		0.5
Pretest	39.31 ± 5.59					
Posttest	38.62 ± 5.16					
Difficult child		26.28	26.28	1		0.1
Pretest	41.62 ± 5.27					
Posttest	39.81 ± 5					

^a $P < 0.05$.

5. Discussion

The findings showed that there was a significant difference between pretest and posttest scores of parenting stress and subscale of parenting distress. Therefore, the mothers' parenting stress was reduced after the intervention. To our knowledge, this is the first written study in Iran about group cognitive behavioral therapy intervention that studied parenting stress improvement in mothers' of children with autism; and the number of studies conducted elsewhere in this field are a few.

Riahi et al. (16), in line with the current research, studied the effect of cognitive behavioral and supportive intervention (ten 90 minute sessions) on mothers of children with autistic disorder and found that the program was effective in improving mental health of the mothers (12). However, there was a significant improvement, with less number of sessions and spending less time and expenses, in the present study.

Keen et al. (17) used two types of parent-focused interventions (a professionally supported intervention that included a workshop and ten home visits or a self-directed video based intervention) for parents of children with Autism Spectrum Disorder (ASD) to decrease parenting stress and increase parenting competence. The professionally supported intervention resulted in reduced child-related parenting stress and increased parenting self-efficacy when compared to the self-directed intervention. The findings of this study support the importance of providing individualized information and professional support around the time of diagnosis for families who have a child with ASD (13).

Although both of the studies conducted by Keen et al. (17) and the present study were efficient in decreasing parenting stress, yet the studied interventions were different. Moreover, our study was carried out only on mothers compared to the study of Keen et al. (17) in which both parents participated.

Overall, the factors that appeared to be important in explaining why the intervention had such a positive effect on mothers include: the cognitive approach improved self-awareness in mothers and helped them recognize their strengths and weaknesses and caused many changes especially in their attitude and beliefs. Emotional management skills in this intervention enhanced mothers' abilities to deal effectively with their negative mood and helped them use efficient methods for conflict resolution. On the other hand, being together and receiving support and empathy from the other group members, which is a feature of group therapy, had a great normalizing effect on the mothers' problems and facilitated their coping and adjustment process.

Lin et al. (18) found that social support received from family, friends and professionals play a crucial role in the well-being of mothers of children with autism (14).

In this study, mothers also received psycho education about the autism disorder, which caused them to consid-

er their children as someone who has less self-help skills. Furthermore, they also considered their social environment as more receptive.

Shaghaghi et al. (19) also in a study entitled "effect of family education on mental health of parents with mentally retarded children" indicated that family education has a positive effect on mental health of mothers with mentally retarded children compared to the control group (15).

In conclusion, the results of this study support the idea that group cognitive therapy is an effective intervention in reducing the parenting stress of mothers' of children with autism even in a relatively short period of intervention plan.

Our study had some limitations. Since all of the participants were mothers, the conclusion could not be generalized to fathers. Moreover, we didn't have a control group.

It is suggested that participation of fathers or even both parents should be the focus of future researches. Other beneficial suggestions would be assigning a control group in order to allow more comparisons.

Conducting such interventions on parents of children with other major disabilities is also suggested.

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Authors' Contributions

All authors participated in designing the project and evaluation of the clinical data. Maryam Izadi Mazidi collected and interpreted the clinical data and performed the statistical analysis. Nilofar Khajeddin and Forogh Riahi re-analyzed the statistical data. Maryam Izadi Mazidi drafted the manuscript and Nilofar Khajeddin revised it. All authors read and approved the final manuscript.

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