The Effectiveness of the Behavior Management Training on Symptoms of Attention Deficit-Hyperactive Disorder (ADHD) Children and on the Mother-Child Interaction

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ABSTRACT

Background: Family interactions of children with attention deficit-hyperactive disorder study, targeted the child’s behavior as acts of stressful stimuli and in turn the mother-child interaction behavior makes especially effective birth. Aim: This study aimed to determine the effectiveness of management training on the symptoms of ADHD family, children and mother-child interaction was performed. Method: The method of quasi-experimental designs, test layout type pretest, posttest control group. The study population consisted of all mothers of children 3 to 12 years old with ADHD have been chosen selection method. The sample included 60 mothers with ADHD kid, who criteria for the study were selected to participate in the program and run after and questionnaires were invited. They were divided randomly into two groups of 30 people. In this study, a questionnaire was CPRS scale parent-child relationship and SNAP scale. Results: The results showed that maternal behavior management training make reducing the symptoms of ADHD in children. Intervention improve the quality of mother-child interaction with component, a significant decrease conflict, increased closeness and no change was observed in the component dependency.

Keywords: Attention Deficit-Hyperactivity; Mother-Child Interaction; Behavior Management Program; Family Base Education.

INTRODUCTION

ADHD disorder is a syndrome characterized by its main attention deficit, impulsivity or hyperactivity. According to the prevalence rates of 7 to 8 percent of school children have been reported. Epidemiologic studies show that this disorder in approximately 5% of children and adolescents and adults occur in about 2.5 percent. ADHD disorder-Diagnostic and Statistical Manual of Mental Disorders fifth edition (DSM-5) in the category of neurological disorders is growing. In the previous edition (DSM-IV) criteria was 7 years old and at least two of the symptoms of this disorder Different conditions can be seen for example in home and school (Sadock and Sadock, 2014).

Children who have ADHD are more likely than children who are the dominant feature of attention deficit syndrome is dominant, are referred for treatment. Most children with ADHD are experiencing some difficulties and social problems. In those children who suffer with social, mental disorders and that children with more behavior problems in school and relationships with peers and family members more.

In general, it seems, the ADHD in a child with lasting psychological damage, especially conduct disorder, social dysfunction and family factors depend disturbed and may improve social functioning children, aggression and reform of family circumstances, the best results are usually the first sign that an active subside and disregard the last sign that goes away, so often in adults, feelings of restlessness and attention problems continue. The possibility of improvement after 12 to 20 years of age (Sadock and Sadock, 2009, Sadock and Sadock, 2014).

Study of Children with ADHD Disorder family interactions reflects the child’s behavior and in turn acts as a stressor stimulus behavior (especially mother) mother-child interaction is effective. Psychological theories about ADHD dynamics also pointed to the possible role of educating poor children. Betelhime (1973) believed that the cause of this disorder is genetic predisposition for the disease, along with education, parents are strict. He believed that strict parents of disruptive behavior and hyperactivity adopted children get tired and lose their tolerance.
For this reason, strict upbringing that makes them more stubborn and disobedient children have more and more in the field of resistance and disturbing behavior-oriented show. Thus, a vicious cycle is created that makes it more difficult for parents of children with a realistic and disturbing behaviors. Some theorists believe the pro-learning, parents in a way quite different from the above are exacerbated by the behavior of children. Children with impulsivity and disruptive behavior-oriented show, in most cases it is necessary to control their parents. In such circumstances, parental attention to this behavior, reward or reinforcement plays a role. The increased frequency and intensity of the treated although parent-child interactions can exacerbate symptoms, there is no evidence to suggest that they alone are the reason (Davey, 2014). Parent-child relationship, including a combination of behaviors, emotions and expectations with respect to both parent and child is unique and the greatest impact on growth, adaptability and current relationships with others.

Mother, spent more time with their children, the relationship between mother with a child with ADHD disorder are more vulnerable. Not very intimate relationship with the mothers of children with disorder, poor parenting, too much conflict in this relationship, lack of flexibility etc. mothers, the difficulties associated with the disorder more and so on, behavioral problems in children with attention deficit disorder-more active, more about the mother-child conflict, violence and parenting calls weaker than before. (Proulx, Holmes and Buhler, 2007; Meyer, 2007).

The education of children with special needs are always conditions, attributes, relationships and family functions and plays an important role in the mental development of children has been considered as the first institution. (Halahan, Pauline and Kaufman, 2014). Therefore, and due to the limitations described methodological considerations in the study of history, family-oriented research to develop behavior management programs for mothers of children hyperactive and review its effectiveness in promoting effective interaction with children will lead.

Parent management training, include interventions to change behavior in which parents teach children. The procedure to change the parent child interaction in-house designed, the parents taught the different ways to communicate with their children, to increase their positive behaviors and decrease negative behaviors, they also reduce parental stress in dealing with confrontational behavior in children and increase the efficiency of their parenting. In fact, the aim of this intervention and treatment, the formation of specific responses in children and their parents, as well as behavior modification, educational training for children and increase children’s good behavior at home, school and community desired (Kazdin, 2000).

This method is based on the principles of conditioning agent and in consecutive years, a good experience in the treatment of childhood behavior problems had. The evidence-based treatment for children with oppositional defiant disorder, parent management training is an evidence-based treatment. The most popular practices in relation to children with attention deficit-hyperactivity management methods with positive reinforcement and other outcomes, desired behavior follows the study the effectiveness of management’s ADHD symptoms family behavior axis mother-child interaction.

**METHOD**

The present study used a quasi-experimental approach to type pretest-posttest control group is. The study population consisted of all mothers of children 3 to 12 years old with ADHD disorder is a psychiatric clinic for children and adolescents visited Tehran Imam Hussein. Targeted selection of the study, a sample of mothers of children by psychiatrists, children's clinic, the diagnosis of ADHD were 36 patients in each treatment group were controlled, experimental conditions timetable for the experimental group company Participants were notified.

In the case of the control group matched with experimental group, 30 mothers of children with ADHD were on the waiting list was 36 mothers in the experimental group, were divided into 3 groups of 12 and last. Sessions for groups, during the period of 60 days, a week and a total of 8 meeting session, the research was completed by mothers. In the next step the participants after 4 months with the questionnaire mentioned case were followed. The data collected was analyzed using SPSS software.

### Table 1. Diagram research plane

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Independent variable</th>
<th>Post test</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>T1</td>
<td>X₁</td>
<td>T2</td>
<td>T3</td>
</tr>
<tr>
<td>Control</td>
<td>T1</td>
<td>-</td>
<td>T2</td>
<td>T3</td>
</tr>
</tbody>
</table>

**Rating Scale SNAP-IV:** SNAP grading scale for diagnosis of ADHD disorder (ADHD) is a special form of a set of **Measuring Tools**

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18 female parents and teachers has been formed. The scale in 1980 by Swanson, Nolan made Pelham and the name of its creators called SNAP. SNAP first scale based on DSM-III was designed and set with the scale DSM revisions was also revised.

Parent-Child Relationship Scale (CPRS): scale above by Pianta (1994) and one set of standardized instruments to measure parent-child relationship, especially mother-child. This scale consists of 33 statement, which in three areas: conflict, closeness, dependency. Cornbakh Alpha 84 /., 69 /., 46 / .. parents perception in their relationship with their child. This scale by Tahmasian and etal (2009) translated content validity and is estimated by experts. Parent-child relationship is a performance scale questionnaire scoring 5 point Likert certainly true of 1 to 5 would not apply to covers. This scale is used to measure the relationship between parent-children of all ages.

Development stages of intervention

Various training programs in a variety of different terms such as parental education, parenting, education, behavior management (Kzdin, 2005), Positive Parenting Programmed (Sanders, 2008), curriculum reform parent-child interaction (Ref, 2006), etc.,For families of children with ADHD-More, either directly (Barkey, 2014) or indirect offer family-focused training program. The program for the development of this research, various components of these various training programs and educational requirements of children with ADHD clinical-extracted for parents, according to the bio-psycho-social characteristics of children program it was prepared. Validity Content specialist medical specialty mental child psychologist and confirmation were studied In these programs emphasize active participation from both parents, but because mothers more time to attend training classes and interaction placing, samples selection mothers includes father with some by mothers meetings were intervention, the test was conducted only by mothers. Toward that volunteer mothers training was stressed, talking issues notes or record and learn from their have to inform his wife and by parents learning and implementing lessons learned related to parenting to actively, along home environment act together.

Table 2. Topics and objectives of management education intervention program training sessions

<table>
<thead>
<tr>
<th>Conference goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
</tr>
<tr>
<td>Parents familiar with the rules of the group and disorder</td>
</tr>
<tr>
<td>Attention deficit-hyperactivity</td>
</tr>
<tr>
<td>Determine the rules meeting</td>
</tr>
<tr>
<td>Trading families with HD failure disease, symptoms, course and etiology</td>
</tr>
<tr>
<td>The introduction of existing therapies (pharmacological and non-pharmacological), the introduction of parent management training</td>
</tr>
<tr>
<td>Second</td>
</tr>
<tr>
<td>Trading parental behavior</td>
</tr>
<tr>
<td>Behavior, behavior of simple and complex</td>
</tr>
<tr>
<td>Positions impact on behavior</td>
</tr>
<tr>
<td>Third</td>
</tr>
<tr>
<td>Training parents and families with behavior management</td>
</tr>
<tr>
<td>The need for parents to positive behavior</td>
</tr>
<tr>
<td>Definition and separation endorse and expression of it</td>
</tr>
<tr>
<td>Learn ways to encourage positive behavior and expression rules</td>
</tr>
<tr>
<td>Fourth</td>
</tr>
<tr>
<td>Parents familiar with behavioral table</td>
</tr>
<tr>
<td>Understanding the manner and conditions of ordering</td>
</tr>
<tr>
<td>Concepts ordering</td>
</tr>
<tr>
<td>Table behavioral or star point</td>
</tr>
</tbody>
</table>
Fifth
Parents familiar method of changing behavior
How to reduce the chances of negative behavior
Familiar with a variety of negative behaviors and ignoring

Sixth
Parents meet with a time of silence, quiet room “Time Out”

Seventh
Trading seventh Parents with negative behavior modification techniques
Trading negative behavior modification techniques to treat families and determine how to determine the outcome of deprivation

Eighth
Trading under the administration of the behavior of children with ADHD parents
Getting to manage children’s behavior in certain circumstances
(Studying, eating, dressing, partying, etc.)
The need to take care of yourself
Ways to take care of themselves, summed meetings and getting feedback from parents and ending sessions

eighth
Trading under the administration of the behavior of children with ADHD parents
Getting to manage children’s behavior in certain circumstances
(Studying, eating, dressing, partying, etc.)
The need to take care of yourself
Ways to take care of themselves, summed meetings and getting feedback from parents and ending sessions

FINDING
The findings show that, on average in attention deficit and hyperactivity variables in the experimental group compared to the pre-test and post-test also decreased in the control group had three measuring changes over time. Performed multivariate analysis of covariance, Hotelling test shows (64/0 = η^2 01/0 > p, 44/13 = F) at least one dependent variable attention deficit - hyperactivity, there are significant differences. Followed by univariate analysis of covariance for attention deficit - hyperactivity used (Table 3).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sig</th>
<th>F</th>
<th>MS</th>
<th>Df</th>
<th>SS</th>
<th>P2η</th>
</tr>
</thead>
<tbody>
<tr>
<td>attention deficit</td>
<td>0/01</td>
<td>10/65</td>
<td>1305/83</td>
<td>1</td>
<td>13051/83</td>
<td>0/39</td>
</tr>
<tr>
<td>hyperactivity</td>
<td>01/0</td>
<td>12/35</td>
<td>1484/27</td>
<td>1</td>
<td>1484/27</td>
<td>0/46</td>
</tr>
<tr>
<td>ADHD</td>
<td>01/0</td>
<td>11/87</td>
<td>1421/05</td>
<td>1</td>
<td>1421/05</td>
<td>0/44</td>
</tr>
</tbody>
</table>

The results show, for attention deficit variables (10/65 = F, 010/0> P) hyperactivity (12/35 = F, 010/0> P) and ADHD(11/87 = F, 010/0> P) is significant univariate analysis of covariance. This means, a pilot intervention
study on tests for attention deficit, hyperactivity and ADHD impact.

Parent-child interaction variables in Table 4 characterized in experimental and control groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Pretest M</th>
<th>Pretest SD</th>
<th>Posttest M</th>
<th>Posttest SD</th>
<th>Follow-up M</th>
</tr>
</thead>
<tbody>
<tr>
<td>conflict</td>
<td>Experimental</td>
<td>38/20</td>
<td>6/94</td>
<td>28/80</td>
<td>6/07</td>
<td>5/46</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>41/50</td>
<td>6/36</td>
<td>42/90</td>
<td>6/31</td>
<td>5/52</td>
</tr>
<tr>
<td>CLOSENESS</td>
<td>Experimental</td>
<td>39/70</td>
<td>5/33</td>
<td>46/10</td>
<td>2/93</td>
<td>3/25</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>39/90</td>
<td>7/26</td>
<td>37/70</td>
<td>6/46</td>
<td>7/25</td>
</tr>
<tr>
<td>dependency</td>
<td>Experimental</td>
<td>11/10</td>
<td>3/14</td>
<td>12/00</td>
<td>2/88</td>
<td>3/50</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>9/60</td>
<td>3/44</td>
<td>9/50</td>
<td>3/911</td>
<td>2/23</td>
</tr>
</tbody>
</table>

See Table 4 shows the changes in test scores in the variables of mother-child interaction and control, and to perform multivariate analysis of covariance assumption of normality for all parent-child interaction variables homology groups and homology variance covariance matrix is (05/0 <p F6,2347 / 47 = 1/42,) is met. Hotlling test for MANCOVA After elimination of the pre-test, (ηP2= 093 01/0> p 83, / 52 = F) suggest that at least one of the dependent variables of the study, there are significant differences and the effect size (ηP2=0/93) large effect size. Similarly, to determine the significance of each of the sub-tests, univariate analysis of covariance was performed.

Table 5 univariate analysis of covariance for parent-child interaction

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sig</th>
<th>F</th>
<th>MS</th>
<th>df</th>
<th>SS</th>
<th>η2η</th>
</tr>
</thead>
<tbody>
<tr>
<td>conflict</td>
<td>0/01</td>
<td>30/20</td>
<td>666/72</td>
<td>1</td>
<td>666/72</td>
<td>0/66</td>
</tr>
<tr>
<td>closeness</td>
<td>0/01</td>
<td>37/22</td>
<td>258/30</td>
<td>1</td>
<td>258/30</td>
<td>0/71</td>
</tr>
<tr>
<td>dependency</td>
<td>0/34</td>
<td>2/46</td>
<td>23/92</td>
<td>1</td>
<td>23/92</td>
<td>0/12</td>
</tr>
</tbody>
</table>

The results indicate the test specification for conflict (F =30/20, 010/0> P), closeness (F = 37/22, 010/0> P) in less than 01/0 is significant but variable dependence (F = 46/2, 010/0> P) between the two groups was not significant. This means, a pilot intervention study on the conflict in and near the impact tests, but had no effect on the dependency. So the hypothesis that the "behavior management training to mothers of children with ADHD-More, the mother-child interaction effective reply is that reduced conflict, increased closeness and dependency has not significantly changed.

DISCUSS

Behavior management training to mothers of children with ADHD, is effective in reducing mother-child conflict. Parent-child relationship through three sub-scale closeness, dependency and conflict were examined, the findings of the research show that, behavior management program to mothers of children with ADHD disorder, to reduce the confliction relations and the mother-child dependency wasn’t effective, and increasing the mother-child closeness. Studies Berkley, 1992; 2002, Anastopoulos, 2001; Leung, 2001; Sanders, 2005.2004, 2008 Taban and Lutzker, 2001; Ercan, Varan, and Deniz , 2005 Pisterman et al., 1992; with the results obtained in this study, is consistent. Mesh and Johnson (2001) in their study results suggest that, Mothers of children with ADHD compared with normal children in relation to child report more conflict. In general, the relationship between mothers and children in families with children with ADHD is lower quality.

Parent-child interaction is an important aspect of the conflict starting with the second year of life with an all-round progress in language skills - the child's cognitive and with a great need for independence, accompanied. In addition, the role of the mother is at this stage, for example, trying to prevent injury to the child and ma-
ternal behavior training appropriate to the culture, runs. So behavior -seeking children and mother-child conflict increases,( Huang et al, 2006). 

Social conflict as normal for the children is necessary, taking into account the fact that the parent-child conflict during the years before the normal school with regard to the evolution of the different axes and high intensity, it is frequently updated. However, high conflict as a sign of the mother-child relationship is deemed ineffective.( abareshi, 2009 ).

Research that examines the families of children with ADHD paid, show the interactions between parents and children, there disorder Johnston and mash (2001), the interaction between parents and children with deficit HD’s contract studied and observed, these parents deal with their children showed more negative reactions were less positive ways.

Barkley and Cunningham (1998) research showed that mothers of children with ADHD attention controlling a style more and more critical state, and social interaction were taken less and less to their children answering Barkley (2005 , 2003) and Anastopolous (1993) showed that teenage mothers communicate with their children’s ADHD disorder, is more negative than other mothers to when disputes occur, is more more angry. Mothers of these teenagers, their often authoritarian and less tendency to problem-solving show. Therefore, specific interaction patterns of the parents, relationships and conflict resolution to the problem semester.

The factors and reasons that cause conflict between parent-child relationships, poor parental skills on how to manage children’s behavior. The elimination of inefficiencies and weaknesses of mothers interacting with their children, teaching methods appropriate treatment, reduction of confl ictual relations in the field of children’s physical and emotional, is reduced. So one of the reasons for improved relations between parent-child could be because of training and training received at these meetings that the other And. maternal behavior changes can be made, the change of manner mothers’ attitude toward the behavior of their children to follow their of attention deficit disorder - hyperactivity is caused by a change in their behavior with their children.

The deal, however, accept, understand the characteristics and behaviors of their children comfortable coated, explain to your child’s behavior, because behavior less due to the stubborn, willful disobedience to their children. Somehow we can say that the correction of false documents would be too much work (Bor et al., 2002). Conflicting relationship with the mother of a child with ADHD, compared to normal children’s families, that the insights and solutions to improve behavior and enhance the quality of your relationship with the child has the disorder. Clinically, professionals who work with these children, the factors that contribute to establishing and maintaining communication vicious cycle of mother and child with the disorder is known, such as parent training programs for the prevention of conflict and the conflict in the relationship parents have –family behavioral disorders such as ADHD to be used.

CONCLUSION

This study examines the effectiveness of management’s ADHD symptoms of family, children, mother-child interaction quality has improved. After intervention and behavior management training to women, data analysis showed that the difference between experimental and control groups is statistically significant. In other words intervention significantly decreased the rate of failure isADHD. In clinical seen, Mothers of children with ADHD compared to children question indifferent, it could more actively to attract children to the behavior of the children’s answers lead. Furthermore, when parents are not able to establish control procedures fixed on their children, so that he acted passively, in the form of ordinary children are receptive to inappropriate behavior. The attention to negative behavior and neglect of positive behavior can be worsened behavior problems in children with ADHD lead (Graham et al., 1999).

This study is an applied research and has several practical implications and recommendations in the area of education of gifted children, children with special needs, developmental psychology, clinical psychology, child psychology and child abuse. According to study the effectiveness of interventions to reduce behavioral problems in children with attention deficit-hyperactivity, this method can be used in clinical settings for the treatment of behavioral problems in the wider children or children with externalizing disorders and in making use be. As well as to prevent the first level of behavioral disorders - emotional, can be common in mothers of children from the intervention and improvement of their interaction with the child. To prevent different levels of behavioral problems common in children, children at risk, children with special needs, intervention research be ready to apply some changes to be applied.

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