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The Effectiveness of Parent Management Training (PMT) on Anxiety and Depression in Parents of Children With ADHD

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Abstract

Background: Attention deficit hyperactivity disorder is one of the most common psychiatric problems in childhood and adolescence.
Objectives: The aim of this study is to evaluate the effectiveness of parent management training (PMT) and a positive parenting program on children's behavioral problems and parents' anxiety and depression reduction.
Patients and Methods: In this semi-experimental study, which was conducted in Zahedan 2011, 36 parents of ADHD children whose kids had been on medications from at least 8 weeks before the study participated. Data were collected by Conners questionnaires for parents and DASS questionnaires about anxiety and depression. We used paired t-tests, chi-square statistical procedures, and SPSS version 16 software for data analysis. The $P < 0.05$ was considered significant.
Results: The mean Conners parents scale in the case group was (104.7 ± 11.04) before and (92.4 ± 8.72) after intervention. In the control group, it was (102.3 ± 22.38) before and (102.2 ± 19.94) after the intervention. The Conners scale changes in the case group before and after intervention was statistically significant (P-value = 0.0001) and in the control group there was no significant change in the Conners scale (P = 0.945).
Conclusions: In general, this study showed that the parent behavioral management training could reduce ADHD symptoms in preschool children .One of the limitations of this study was the number of cases; therefore, a further survey with a larger group might be considered.

Keywords: ADHD, Anxiety and Depression, Parent Management Training

1. Background

Attention deficit hyperactivity disorder is one of the most common psychiatric problems in childhood and adolescence. It has been estimated that 5% - 12% of school-age children are suffering from ADHD (1). In Iran, prevalence of the disorder is 5-3 percent among primary school children (2). ADHD can be continued through adolescence and adulthood and can create problems and defects in the areas of attention, activity, and impulsivity. Since this disorder can cause difficulty in education and learning ability, increase substance abuse and accident-prone behavior, and lead to criminal activity, in addition to increasing the probability of depression and anxiety, treatment becomes necessary (3). Studies have shown that 70% of children with ADHD have at least one cell disruption for behavioral and emotional (3). However, the concerns of parents and physicians because of the side effects of the medicine on the one hand, and the unavailability of research findings that reveal the long-term effects of certain medications on the other hand, create some problems when prescribing these drugs (4). The effect of this disorder on families is obvious: families with children who have ADHD experience more stress and feel unconfident about their parenting skills (5). Parents of children with ADHD have contradictory parenting and they experience more depression and maternal conflict (6). Parent management training (PMT) based on social learning models is an effective strategy in treatment of children with behavioral problems (7). In PMT, parents learn positive interactions with their children and reduce forcible and negative ones with them. The effectiveness of PMT on primary school children with ADHD was studied (8); the results showed improvement in parents' self-esteem and better management of their ADHD child's behavior, along with reduction of stress

and depression in participating families (9). The standard drugs for ADHD treatment have many side effects (insomnia, loss of appetite, headache), need to be used regularly, and do not cure the disorder completely. On the other hand, children with ADHD have co-existing behavioral and emotional problems, and parents of kids with ADHD experience more stress and depression and feel unconfident in their parenting skills.

2. Objectives

This study was conducted to evaluate the effectiveness of PMT and positive parenting programs on children's behavioral problems and parents' anxiety and depression reduction.

3. Patients and Methods

3.1. Study Design

In this semi-experimental study, conducted in Zahedan in 2011, 36 parents of children with ADHD whose kids had been on medications for at least 8 weeks before the study participated.

3.2. Participants

The diagnosis of ADHD was carried out by a child and adolescent psychiatrist. Through the use of a simple sampling method, these parents were divided into two groups: the intervention group (children on medication + parents who passed 8 sessions of PMT) and the control group (children only on medication). Hyperactivity was matched between the two groups. All participants in both groups were on medication (stimulant) for 8 weeks before intervention, and symptoms were controlled partially in both groups. For the intervention group, the details of the program were described and they filled out questionnaires; at the last session of the program, they answered them again.

3.3. Data Collection

For the collection of information, two questionnaires, the depression anxiety stress scale (DASS) and Conners questionnaires, were used. The positive parenting program was provided in five levels, and one of them was associated with parents' group education to improve their parenting skills. This program was performed as weekly two-hour sessions for eight weeks. In the first four sessions, the topics were discussed with parents by a child psychiatrist through educational films. During these sessions, parents were taught about essential parenting skills through practice, role playing, group discussion, and home assignments. At the next sessions, each pair of parents had 10 - 15 minutes to discuss their problems with accomplishing the program.

3.4. Sample Size

The sample consisted of 36 families with a child who had a clinical diagnosis of ADHD. The diagnosis was made by two board-certified child and adolescent psychiatrists. Sample size was 18 in each group (6).

3.5. Data Analysis

Data were collected by Conners questionnaires for parents and DASS questionnaires about anxiety and depression. We used paired t-tests, chi-square test statistical procedures, and SPSS version 16 software for data analysis. A $P < 0.05$ was considered significant.

4. Results

In this study, there were 22 boys (61.1%) and 14 girls (38.9%). In the case group there were 13 boys (72.2%) and 5 girls (27.8%), and in the control group there were 9 boys (50%) and 9 girls (50%). Statistically, there was no gender differences between two groups ($P = 0.15$). Children's mean age was (5.8 ± 1.9) in total, (7.3 ± 5.8) for the case group and (5.8 ± 2.1) for the control group.

The changes of Conners parents' scale after intervention in each group are shown in Table 1. Changes in the case group were more than in the control group.

The Conners scale change in the case group before and after intervention was statistically significant. It means that the mean scores on the Conners scale decreased significantly ($P < 0.0001$). In the control group, there was no significant changes in the Conners scale ($P = 0.945$). The parents' anxiety and depression scales in the case group decreased significantly ($P < 0.0001$). In the control group, there were no remarkable changes in anxiety and depression scales before and after intervention ($P = 0.841$). This result is shown in Table 2.

5. Discussion

In this study, parents with children who had ADHD were evaluated. The results showed that the mean Conners scale of parents in the case group had a significant difference after intervention; the scale was reduced by a positive parenting program. Other studies have also reported the effect of parental training in children with ADHD. The study conducted by El-Sayed et al in El Abbasia hospital in 2016 showed important positive changes in many behavioral aspects in children with ADHD whose parents had received parental training; this result is consistent with our result (10). In another survey conducted by Fazeli et al, they find parental education to be effective in reducing the behavioral problems of children with ADHD (11).

Table 1. Conners Parent Rating Scale in Behavioral Problems in Two Groups

Group	Before Intervention	After Intervention	Change	P Value
Case	104.7 ± 11.04	92.4 ± 8.72	12.27 ± 11.6	0.0001
Control	102.3 ± 22.38	102.2 ± 19.94	0.111 ± 6.76	0.945

Table 2. Comparison of Anxiety and Depression Scale Between Two Groups

Group	Before Intervention	After Intervention	Change	P Value
Case	41.3 ± 15.91	31.6 ± 13.48	9.66 ± 10.39	0.001
Control	47.3 ± 24.72	47.7 ± 21.6	0.444 ± 9.26	0.841

Fiona E and Sander H conducted a study in 2002, evaluating the effectiveness of positive parenting training on 20 families with children between 5 - 9 years old who had ADHD. The families were divided into two groups: control and training group. At the end of the survey, parents in the training group reported significant reduction in oppositional and destructive behavior, hyperactivity, and impulsivity in their children. In addition, these parents felt more self-confidence and self-esteem. The reduction of their partnership conflicts, and their experiencing a higher level of satisfaction about life, was significant in comparison with the control group (12).

Pisterman et al. studied a parent-child scale score before treatment, after treatment, and three months later. The results showed positive effectiveness of the treatment. In another survey, they find there were more negative mother-child relationships in parents of children with ADHD than in the control group who had normal children (13). Our study shares the same result with the Pisterman et al. survey.

The present study showed that the mean scale of parents' anxiety and depression in the case group had a significant difference before and after intervention and that a positive parenting program was effective in reducing parents' anxiety and depression scales.

In the Swanson study, they compared 718 families with preschool children who had ADHD and received parenting skills training with 806 families in a control group. At a two-year followup, they found behavioral problems of children decreased and parenting skills improved in educational program participants. Parents' anxiety and depression levels significantly decreased and parents' relationships improved (14). Behavioral treatments produce effects on attention and concentration of children with ADHD and improvement in their educational function, learning abilities, impulsive behavior, and motion activity (15, 16).

One of the limitations of this study was number of cases; therefore, a further survey with a larger group might be considered.

5.1. Conclusion

Behavioral treatments produce effects on attention and concentration of children with ADHD and improvement in their educational function, learning abilities, impulsive behavior, and motion activity. Teaching of positive parenting in parents whose children have ADHD improves parenting skills, reduces problems in the children's upbringing, and decreases parents' depression, anxiety, and stress. In general, this study showed that parent behavioral management training could reduce ADHD symptoms in preschool children.

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Footnotes

Conflict of Interest: There is no conflict of interest to be declared.

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