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The Effectiveness of Barkley's Parent Training on Social Skills of Students with Attention Deficit/Hyperactivity Disorder

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ABSTRACT

Background: Attention Deficit Hyperactivity Disorder (ADHD) damages the children's communicative and social performance. Therefore, the present study was conducted to investigate the effectiveness of Barkley's parental training on social skills of students with ADHD.
Methods: This random trial was conducted on primary school students with ADHD in Isfahan in academic year 2016 - 2017. As a result, 40 students with ADHD were selected from primary school students with ADHD via clustered random sampling method and were randomly categorized into case and control groups. The parents in the case group received fifteen sixty-minute therapeutic interventions in two months. The applied questionnaires included ADHD questionnaire and social skills questionnaire. The data were analyzed using ANCOVA method.
Results: The results showed that Barkley's parental training had significant effect on social skills of students with ADHD (P-value < 0.001) so that this therapy could improve social skills in ADHD students .
Conclusion: According to the findings, it can be concluded that Barkley's parental training can be applied as an efficient treatment to improve social skills of ADHD children by modifying parents' interactional and parental model.

Keywords: ADHD, Barkley's Training, Social Skills

Introduction

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common behavioral disorders among schoolchildren, especially primary schoolchildren, which usually occurs at early childhood and preschool age.[1, 2]

If this disorder is not treated during childhood, it may continue in adulthood and lead to other disorders such as disobedience, pertinacity, conduct disorder and learning difficulties, as well as anxiety and depression.[3, 4]

ADHD affects at least two areas and disrupts the function of the individual, depending on the degree of his/her growth, in social, educational and occupational contexts and is not accompanied by incidence of growth disorder, schizophrenia and other psychiatric disorders, and also another mental disorder should not have a better explanation than its.[5-8]

The cognitive characteristics of this disorder include the defective behavioral inhibition, executive dysfunction, disruption of continuous purposeful behaviors and adaptive skills, and undesirable social behaviors that lay people often refer to as noisy, cranky, wacky, vibrant, and sloppy. In fact, the main problem of these children is the inability to establish an appropriate and satisfactory relationship with others.[9-14]

Accordingly, one of the serious problems facing children with ADHD is lack of effective social interaction with peers.

When these children cannot have a good relationship with their friends because of not enjoying necessary skills, they will become hopeless and frustrated and be filled with negative and unpleasant feelings about themselves, thereby weakening their feelings of self-esteem and increasing their disabilities and behavioral disorders.

It is therefore important to develop and strengthen social skills in these children and to provide pleasant experiences with social interactions for them.[15]

Social skills are a set of abilities that initiate and maintain positive and useful social relationships, develop friendship and integrity with peers, and enable one to adapt to situations and accept the demands of social milieu.[16-18]

Efficient social interactions are clearly necessary for emotional and behavioral adaptation and successful performance at home, at school, at work and in the community. Skillful interpersonal behavior naturally has rewarding consequences, such as starting and deepening friendships and reducing sources of stressors in life.[19-20] The treatment methods of these children can be taught to their parents.[21-22]

In this type of treatment, including Barkley's Parent Training, the program aimed at improving the behavior of the child is implemented in the home environment and by parents who have the most interaction with him/her. Studies show that these trainings can reduce the main symptoms of ADHD.[23-24]

It also improves the child's behavioral problems and classroom behaviors.[25] Another advantage of parental education is that it affects different aspects of parental and family functioning.

Previous research suggests that this kind of treatment reduces parenting stress and can also lead to improved self-esteem.[26]

The effects of this approach in improving the working memory of children with ADHD,[27] reducing the symptoms of ADHD,[28-29] improving social skills of children with disabilities[30] and mental health of mothers with children with ADHD [31], reducing behavioral problems among students with conduct disorder [32], improving parental satisfaction and self-efficacy, and the overall sense of parental competence, reducing children's emotional and behavioral problems [31] and behavioral problems in children with externalized behavioral disorder,[33] and improving the emotional regulation of children with ADHD[34] and the clinical and psychological symptoms of vulnerable children and adolescents[35] have been studied and confirmed.

But the innovation of this study is to investigate the effect of this training on the social interactions

of children with ADHD in an Iranian community.

Therefore, given that the above issues can create problems for the child, family, school, and society, these problems can disrupt the educational, emotional, social, family, and economic context, then the necessity and importance of this research are due to minimizing the problems caused by this disorder through timely training and appropriate intervention for parents and preventing the resulting damage in the long term.

As the literature shows, Berkley's Parent Training improves the psychological, emotional, behavioral and social components of vulnerable children.

Therefore, with regard to the issues raised above and the research done on the impact of Berkley's Parent Training in improving psychological, emotional and behavioral problems, and also due to the lack of research on the effect of Berkley's Parent Training on social skills of students with ADHD, the present study seeks to answer the question of whether Berkley's Parent Training is effective on the social skills of students with ADHD.

Methods

The study population of students with ADHD in Isfahan primary schools during the academic year 2015 - 2016.

In this study, random sampling and randomization were used to select samples. To do this, three districts were selected randomly from among the 6 education districts of Isfahan. Then, 10 schools were randomly selected from each district.

Conner's questionnaire form of teachers was distributed among teachers of these schools, and as a result, 110 students who scored higher in this test (score above 65 or obtaining a mean score of 1.5 or higher in this test indicates the existence of Disorder), have been diagnosed with attention ADHD.

In order to confirm the scores of the questionnaire, the researcher also paid for the clinical observation of children with ADHD and through this observation it was found that these children are more attentive to the problem and lack of attention than other children.

In addition, the clinical trial was performed on the basis of the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders.

The results indicated that after 10 days of observation and conducting clinical interviews, all children who received the Conner's diagnosis of attention deficit disorder and hyperactivity disorder were diagnosed with a disorder in these two factors (observation and clinical interview) they were

Out of 110 students, 50 were selected randomly and assigned into two groups of 25 people. Then the parents of these students were invited to participate in the research.

The procedure involved one parent attending a training session and then recording the content of the training session, sharing it with her spouse, and practicing them in the process of implementing the learning outcomes of Berkley's Parent Training between them.

During the course of the research, five of the experimental group were excluded due to negligence in the presence of treatment sessions.

Therefore, to establish a fit between the control and experimental groups, 5 people were randomly excluded from the control group. The reason for selecting 20 people for each group was, as Delavar[36] states, in experimental research, 15 individuals in each group are sufficient so that the findings will be generalizable.

In the present study, to increase the external validity of the research, 20 subjects were included in each group. The intervention group received Berkley's Parent Training as group throughout 15 60-min sessions (two sessions a week) during two months, while the control group simultaneously attended conventional training sessions only.

The inclusion criteria were: having a child with ADHD, having physical and psychological health, having at least high school diploma, and volunteering to participate in the study; and the exclusion criteria were: not attending at least two training sessions and not cooperating with the

study, not doing the specified assignments in the classroom and the occurrence of an unforeseen problem.

In the present study, the following research tools were used:

Social Skills Rating System of Gresham and Elliott

In this study, the 29-item Social Skills Rating System of Gresham and Elliott was used to measure social skills. The questionnaire has four subscales cooperation, assertiveness, self-control and empathy.

The items of this scale are rated on a 4-point Likert scale from Very low (scored 1) to Very high (scored 5).

The lowest attainable score on this scale is 29 and the highest attainable score 95. The reliability of the Gersham and Elliott's scale (16) has been investigated and confirmed in various studies, as the researchers have reported the internal reliability of the scale for teachers to range from 0.44 to 0.96.

In addition, the content validity of the scale has been reported as acceptable .[37]

In a study in Iran, Shahim studied social skills in mentally retarded children using this scale. The reliability of this scale in that study was 0.87 for the cooperation subscale, 0.76 for the assertiveness scale, 0.72 for the self-control scale, 0.72 for the empathy scale and 0.70 for the score on the whole scale.[38]

Further, Sabzevar, Liaghatdar, Abedi reported the validity and reliability of the scale as acceptable.[39] The reliability of this scale was calculated at 0.84 using Cronbach's alpha coefficient.

Connors Teacher Questionnaire

The Connors Teacher Questionnaire was developed by Brook and Clinton in 2007 to detect children with ADHD.

This questionnaire has 26 items and was completed by teachers for each participant before and after the implementation of the training program. The items are scored on a 4-point Likert scale (Never, To some extent, Very and Very high scored as 1 to 4, respectively).

For the hyperactivity subscale, the minimum attainable score is 15 and the maximum attainable score 60, and for the attention deficit subscale the minimum attainable score is 11 and the maximum attainable score 44. The minimum total score of the questionnaire is 26 and the maximum total score 104.

In the study of Shahim, Mehrangiz and Yousefi, the test-retest reliability coefficient and Cronbach's alpha coefficient of the questionnaire were obtained, respectively, 0.85 and 0.76 for the total score which indicates the reliability of the instrument. The content validity of the questionnaire was also confirmed.[40]

According to the study of Dortaj, Mohammadi, the sensitivity of this scale is 95% and its reliability 90%. [41]

The reliability of the questionnaire was calculated, using Cronbach's alpha coefficient, for the hyperactivity subscale at 0.88, for the attention deficit subscale at 0.91, and for the whole questionnaire at 0.90.

After setting the research purposes, at the beginning of the training program, randomly selected participants completed the questionnaires as pretest, and then were randomly assigned to two groups.

Afterwards, the participants in the experimental group underwent the Berkley's Parent Training through 15 60-min sessions.

The control group received conventional training during this period. After the research was completed, Berkley's Parent Training was also conducted for the control group. At the end of the sessions, the indicators assessed in the pre-test were re-evaluated.

The reliability of this program has been examined and confirmed by Hosseinzadeh Maleki, Mashhadi, Ghanai Chamanabad et al.[27] It should be noted that the training was done as group.

At the level of descriptive statistics, the mean and standard deviation were used and, at the level of inferential statistics, Shapiro-Wilk test to investigate the normal distribution of variables,

Levene's test to examine the equality of variances, t-test to compare the pretest scores on dependent variables between the experimental and control groups, and covariance analysis to investigate the research hypothesis were used.

Results

Findings on demographic data indicate that the age range of our participants was 35-44 [mean (SD): 38.10 (3.13)] years old. In addition, most participants had bachelor's degree (48%). In addition, most of the participants were mothers [n: 34 (84%)]. First, descriptive findings will be presented.

Before the presentation of the results of the covariance test, the parametric tests were used. Accordingly, the results of Shapiro-Wilk test indicated that the assumption of normal distribution of data in the social skill variable at pretest and posttest was observed in the experimental and control groups (F = 0.63, P-value = 0.21 and F = 0.54, P-value = 0.18, respectively).

The homogeneity of variance was also estimated by Levine test. The results were not meaningful. This result found that homogeneity of variances was assumed (P-value < 0.05).

In addition, the results of t-test showed that the difference in pretest score of the dependent variable (social skill) between the experimental groups and the control group was not significant (P-value < 0.05).

It should also be noted that in the results regarding the assumption of homogeneity of the regression line slope, showed that the interaction of pretest with the grouping variable in the social skill variable was not significant (F= 11.3, P-value = 0.33). This means that the hypothesis of homogeneity of the slope of the regression line in the social skill variable is confirmed

According to the results of Table 3, independent variable education (Berkley's Parent Training) leads to a significant difference in the mean scores of dependent variable (social skills of students with ADHD) at post-test at the error level of 0.05.

It is therefore concluded that by controlling the interventional variable (pre-test scores), the average score of social skills variable in students with ADHD changed, so that according to the descriptive data, the post-test scores of social skills of the students increased.

The effect size of Berkley's Parent Training on the social skills of students with ADHD was 0.35.

This means that 35% of the variance in social skills of students with ADHD are explained by group membership (Berkley's Parent Training).

Table 1. Summary of Berkley's Parent Training sessions

Sessions	Session description
1	Defining attention deficit/hyperactivity disorder in order to acquaint parents with this disorder and its symptoms, and reviewing the misconceptions about the disorder and the problems of students affected.
2	Teaching obedience and following the instructions to the child and using the Take and fetch drills (when parents have nothing to do, they ask the child to do small things for them with effort; one thing for one time; verbal reinforcement after work is done.)
3	Advising parents to give clear instructions to the child and divide them into small, intermittent sections. Making the thinking and problem solving methods objective and tangible. At the time of giving the instructions to the child, sitting in front of the baby and looking at his/her eyes.
4	Asking parents to prepare the environment and surrounding in such a way as to minimize distraction and help the child focus on what matters.
5	Giving immediate feedback and reward after the child completes a homework or following rules, using a Gothic system, parents' focusing on one or two social behaviors that they like him/her to exhibit more in his/her daily interactions with his/her peers.
6	Reminding the child of the passage of time to have him/her pay more attention to surroundings and

	to make him/her sensitize to the time, and reminding important points regarding the child's performance.
7	Leading the child's behaviors from immediate joy and success toward the future goals, nurture them in the future, and educate children.
8	Encouraging the child to invite classmates, back to school or weekends. In this case, parents were asked to focus on children who share common interests with their children. Plan for games that have a specific purpose and structure. Games should be determined and monitored by adults.
9	Monitoring the behavior of the child while playing with peers and encouraging the new positive behavior of the child and give him a Chip at the rest or end of the game.
10	Controlling your negative feelings and emotions at home and preventing family members from doing any wrong and unpleasant behavior, monitoring TV programs and eliminating the possibility of watching violent TV programs.
11	Emphasis on the consistency and coordination of parental performance for managing child behavior. Parents were advised to educate the child about how to deal with the harassment and mockery of peers.
12	Reviewing the new social skills of the week and explaining the new skills they like their child to do and rebuilding the situation of dealing with peers for both the child and asking the child to practice skills and then encouraging him/her to do appropriate behaviors.
13	Filming children's interactions with peers or siblings away from the child's eyes and without paying attention to and reviewing them in the child' but in another time and place, informing the child about how to behave in different situations and giving examples of positive behaviors.
14	Limiting the relationship between child and aggressive or socially isolated children Encouraging your loved ones to communicate with children and invite them to your home, which is a positive pattern of relationships with peers.
15	Asking parents to focus on collaborative academic skills In this research, data analysis was performed by the SPSS version 23 at two levels: descriptive and inferential statistics.

Table 2. Descriptive statistical results of social skills in pre-test and post-test stages

Variables	Pretest		Posttest	
	Mean	SD	Mean	SD
Experimental group	39.95	6.23	66.20	8.64
Control group	40.55	5.29	42.05	6.10

Table 3. The results of covariance analysis of Berkley's Parent Training on social skills of students with attention deficit/hyperactivity disorder

Variable	Group	Sum of squares	df	Mean squares	F	Significance level	Effect size	Test power
Social skill	Covariance	57.03	1	57.03	1.36	0.25	0.04	0.21
	Inter-group	5885.10	1	5885.10	140.92	0.0001	0.79	1
	Error	1545.11	37	41.76				
	Total	124615	40					

Discussion

The purpose of this study was to investigate the effectiveness of Berkley's Parent Training on social skills of students with ADHD. The results showed that Berkley's Parent Training had a significant impact on social skills of students with ADHD, so that this training improved the social skills of students with ADHD.

The results of this study on the effectiveness of Berkley's Parent Training on the social skills of students with ADHD are consistent with the findings of Hosseinzadeh Maleki, Mashhadi, Ghanai Chamanabad, et al; Abedy, Seyyedghaleh, Bahramipour; Javadi, Borjali, Borjali; Goodarzi, Hashemi , Taghavi; Reyno, McGrath; Liu; Wallace, Quetsch, Robinson, McCoy, McNeil; As the researchers have shown, Berkley's Parent Training is effective in reducing ADHD symptoms, improving working memory and emotional and social adjustment of children with ADHD, improving clinical and psychological symptoms of vulnerable children and adolescents and reducing behavioral problems of students with conduct disorder.[27-29, 32-35]

Additionally, Kadkhodaie , Ahmadi, Abedi have shown that parental education can reduce the behavioral disorders of children and proportionately improve their communication and social skills by influencing the mental health of mothers with children with ADHD and improving parental satisfaction, self-efficacy and the overall sense of parental competence as well as improving parenting skills.[31]

Finally, Alizadehfard, Mohtashami, Tadris Tabrizi, have reported that Berkley's Parent Training leads to the development of social skills in children with disabilities. [30]

To explain this finding, it should be stated that parental education makes it possible for parents to have enough time to get close to their child, especially when parents are not ready to accept and help their child [33].

Accordingly, the education of parents of children with ADHD leads to a greater understanding of their child's developmental conditions, and group meetings for parents provide the opportunity to express the stresses and mental pressure that arise from the tension of daily interactions with their child and to reach a sense of empathy with other parents.

In general, it seems that as one's awareness and understanding increase, he/she achieves a better understanding of his/her own behavior; this increase in awareness naturally leads to an increase in the occurrence of appropriate behaviors and a decrease in that of inappropriate behaviors.

In fact, this training helps individuals understand the relationship between one behavior and the possible consequences of that behavior and, as a result, choose and exhibit behaviors that have positive social consequences.

To explain the other result of this study, parents can play a very important role in teaching social skills to children. Intra-family interactions in families with children with ADHD are associated with high levels of incompatibility and disobedience as these children do not follow parents' and other family members' commands, do not carry out assignments and have more negative behaviors than their peers [34]; when parents reach an appropriate understanding of the concept of ADHD, they do not regard the child's problems as personal, and their mental pressure and stress decreases.

Parents will find out that children do not intentionally harass them and do not annoy friends, and that these are due to the fact that the children do not have a proper understanding of their own behaviors.

As a result, they change their way of dealing with the child and encourage them to achieve their goals rather than punishing them, which will increase the child's obedience to and cooperation with the parents.

Parents will feel more comfortable by attending educational sessions and being familiarized with parents with similar problems, and therefore problems such as stress and anxiety caused by the child's behaviors will be reduced, and, subsequently, a more relaxed environment is

provided for the child in which the child responds to behaviors and commands better; the child can also establish better social relationships with his/her peers by exploiting the parents' guidance.

This process will allow these children to gain more social skills in the form of social communication

As another explanation, it should be noted that according to the content of the second, third and fifth sessions, parents learned to make their expectations of children reasonable, and give their orders to the child objectively and concisely and encourage him/her to respond positively.

And these factors increase the incentive for children to be more obedient to their parents. In addition, according to the teachings given to parents, children were also taught by parents to control their anger and to respond to mockery and pressure from peer groups more positively and avoid being aggressive and impulsive.[25]

Conclusion

When children receive appropriate feedback from peers, they will be more likely to establish relationship and to enter into a relationship without being forced by the people surrounding, especially when they and their peers have shared interests. This was raised in the eighth and fourteenth sessions of parents training.

Parents can also bring about more peace for the child and cause him/her to emulate them by creating intimate relationships among family members and eliminating tension in the home environment as well as controlling the negative conditions.

This condition is also beneficial to parents and reduces tension and anxiety in them. Generally, the child becomes more compatible with the environment by receiving training from the parents, and consequently his/her social skills are improved.

The present study, as with other research, suffered from limitations such as lack of the generalizability of the research results to other groups of students and geographical regions, lack of follow-up and no control for potentially effective factors on the social skills of children with ADHD.

Therefore, at research level, it is recommended to duplicate this research in other study populations and other geographic regions, and to implement follow-up and control for variables potentially affecting the social skills of children with ADHD in order to increase the generalizability of the findings.

According to the findings of this study, it is recommended to use Berkley's Parent Training in psychology clinics and counseling and psychological services centers of education departments.

It is also suggested that counselors at different school levels in in-service training and workshops be familiarized with this therapeutic method and its use to improve the social skills of children with ADHD.

Conflicts of Interest

The authors declare no conflicts of interest.

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Authors' Contribution

Conceptualization, S.Y. and M.M.; Methodology, A.G.; Formal Analysis, S.Y., Investigation, A.G.; Data Curation, M.M., Writing – Original Draft, S.Y. and A.G.; Writing – Review and Editing, S.Y Resources, M.M.; Supervision, S.Y.
All authors read and approved the final manuscript and are responsible about any question related to article.

References

1. Asli Azad M, Faramarzi, S, Arefi, M, Farhadi T, Fakkar, AS. The effectiveness of meta-cognitive knowledge on reduced hyperactivity and improved attention in children afflicted with

attention deficit and hyperactivity disorder (ADHD) in the primary school. Advances in Cognitive Science. 2014;16(1):49-57. [Persian]
2. Keute M, Krauel K, Heinze HJ, Stenner MP. Intact automatic motor inhibition in attention deficit hyperactivity disorder. Cortex. 2018; 109: 215-225.
3. Tandon M, Pergjika A. Attention deficit hyperactivity disorder in preschool-age children. Child and Adolescent Psychiatric Clinics. 2017; 26(3): 523-538.
4. Magnin E, Maurs C. Attention-deficit/hyperactivity disorder during adulthood. Revue Neurologique. 2017;173(7-8):506-515.
5. Hawkey EJ, Tillman R, Luby JL, Barch DM. Preschool executive function predicts childhood resting-state functional connectivity and attention-deficit/hyperactivity disorder and depression. Biological Psychiatry: Cognitive Neuroscience and Neuroimaging. 2018;3(11): 927-936.
6. Werst M, Kalata R, Tomkins J. Education of Exceptional Children, translation by Mojtaba Amiri Majd. Tehran: Shahr Ashob Publication; 2007. P:552. [Persian]
7. Saduk BJ, Saduk VA, Roez P. Summary of psychiatry based on DSM V, translation by Hamze Ganji. Tehran: Arjmand Publication; 2016. [Persian]
8. Graziano PA, Garcia A. Attention-deficit hyperactivity disorder and children's emotion dysregulation: A meta-analysis. Clinical Psychology Review. 2016; 46:106-123.
9. Semrud Clikeman M, Steingard RJ, Filipek P, Biederman J, Bekken K, Renshaw PF. Using MRI to examine brain-behavior relationships in males with attention deficit disorder with hyperactivity. Journal of the American Academy of Child & Adolescent Psychiatry. 2000;39(4): 477-484.
10. Kaffman M, Elizur E. Bereavement responses of kibbutz and non-kibbutz children following the death of the father. Journal of Child Psychology and Psychiatry. 1983;24(3):435-442.
11. Bussing R, Gary FA, Mills TL, Garvan CW. Cultural variations in parental health beliefs, knowledge, and information sources related to attention-deficit/hyperactivity disorder. Journal of Family Issues. 2007;28(3):291-318.
12. Davids E, Gastpar M. Attention deficit hyperactivity disorder and borderline personality disorder. Progress in Neuro-Psychopharmacology and Biological Psychiatry. 2005; 29(6):865-877.
13. Seif Naraghi M, Naderi A. Education of exceptional children. Tehran: Payame Noor University Press, pages; 2008. P:367. [Persian]
14. Abedi A, Qavam AS. Psychology and education of children with attention deficit/ hyperactivity. 3rd ed. Isfahan: Nashr e Neveshteh Publication, pages; 2009. P:82. [Persian]
15. Afrouz, GH. An introduction to psychology and the education of exceptional children. Tehran: Tehran University Press; 2010. P:254. [Persian]
16. Elliott SN, Gresham FM. Social skills interventions for children. Behavior modification. 1993;17(3):287-313.
17. LaGasse AB. Effects of a music therapy group intervention on enhancing social skills in children with autism. Journal of Music Therapy. 2014; 51(3):250-275.
18. Watson TS, Skinner CH. Functional behavioral assessment: Principles, procedures, and future directions. School Psychology Review. 2001; 30(2): 156-172.
19. Mafra H. Development of learning and social skills in children with learning disabilities: an educational intervention program. Procedia-Social and Behavioral Sciences. 2015;209:221-228.
20. Chambers R, Gullone E, Allen NB. Mindful emotion regulation: An integrative review. Clinical Psychology Review. 2009;29(6):560-572.
21. Bell AS. A critical review of ADHD diagnostic criteria: What to address in the DSM-V. Journal of Attention Disorders. 2011;15(1):3-10.

22. Conn AM, Szilagyi MA, Alpert-Gillis L, et al. Pilot randomized controlled trial of foster parent training: A mixed-methods evaluation of parent and child outcomes. Children and Youth Services Review. 2018;89:188-197.
23. Daly B, Creed T, Xanthopou M, Brown R. Psychosocial Treatments for Children with Attention Deficit Hyperactivity Disorder. Neuropsychology Review. 2008;17:73-89.
24. Gerrard L, Anastopoulos AD. The relationship between ADHD and mother–child attachment in early childhood. Paper presented at the annual meeting of the American Psychological Association; 2005.
25. Barkley RA. Taking charge of ADHD: The complete authoritative guide for parents. NewYork: Guilford; 2005. P:99-126.
26. Anastopoulos AD, Shaffer SD. Attention deficit/ hyperactivity disorder in C.E. 1st ed. Canada: Guilford; 2001.
27. Hosseinzadeh Maleki Z, Mashhadi A, Ghanai Chamanabad A, et al. Working memory training, Barkly parent education program and combining these two interventions on improving the working memory of children with ADHD. Clinical Psychology Research and Counseling. 2013;15(4):53-64. [Persian]
28. Abedy AR, Seyyedghaleh A, Bahramipour M. Comparison of the effectiveness of filial therapy and Barkley's parent training program in reducing the symptoms of anxiety and ADHD in children. Journal of Exceptional Children. 2017;17(3):111-120. [Persian]
29. Javadi TH, Borjali M, Borjali A. Effectiveness of Barkley's behavioral parent training in reducing symptoms of children with attention deficit hyperactivity disorder. The Journal of Qazvin University of Medical Sciences. 2013;17(6):47-52. [Persian]
30. Alizadehfard, S, Mohtashami, T, Tadris Tabrizi, M. The effectiveness of parents training program on social skills of children with learning disability. Journal of Learning Disabilitie. 2016;5(3):89-107. [Persian]
31. Kadkhodaie MS, Ahmadi A, Abedi A. The effect of Barkley's parenting program on mental health of mothers of boys with attention deficit hyperactivity disorder in elementary school (7-12) in Isfahan. Knowledge & Research in Applied Psychology. 2017;18(3):12-24. [Persian]
32. Goodarzi MA, Hashemi R, Taghavi MR. The effect of behavioral training of mothers with conduct disorder children on behavior performance problems in their children. Knowledge & Research in Applied Psychology. 2018;19(1):1-9. [Persian]
33. Reyno SM, McGrath PJ. Predictors of parent training efficacy for child externalizing behavior problems–a meta-analytic review. Journal of Child Psychology and Psychiatry. 2006;47(1): 99-111.
34. Liu S. Adding emotion-regulation techniques into the Barkley's behavioral parent training program for parents of school-aged children with ADHD. Neuropsychiatrie de l'enfance et de l'adolescence. 2012;5(60):196-201.
35. Wallace NM, Quetsch LB, Robinson C, McCoy K, McNeil CB. Infusing parent-child interaction therapy principles into community-based wraparound services: An evaluation of feasibility, child behavior problems, and staff sense of competence. Children and Youth Services Review. 2018;88:567-581.
36. Delavar A. Research Method in Psychology and Educational Sciences. Tehran: Nashre Virayesh Publishing; 2012. [Persian]
37. Biabangard E. A comparison of social skills between blind, deaf and normal high school female student in Tehran. Journal of Exceptional Children. 2005;5(1):55-68. [Persian]
38. Shahim, S. Compare social skills and behavior problems in a group of normal children and those with learning disabilities at home and school. Journal of Education & Psychology. 2003; 33(138): 121. [Persian]
39. Sabzevar M, Liaghatdar M, Abedi A. The comparison of social Skills components of primary students at without bag schools and

public schools of Isfahan. New Educational Approaches. 2015;10(1):105-120. [Persian]

40. Shahim S, Mehrangiz L, Yousefi F. Prevalence of attention deficit hyperactivity disorder in a group of elementary school children. Iranian Journal of Pediatrics. 2007;17(2):211-216. [Persian]

41. Dortaj FA, Mohammadi AK. Family Functioning in 7-15 year old Children with and without ADHD in Tabriz City. Journal of Family Research. 2010; 6(2):211-216. [Persian]