

The Effectiveness of Discipline Training in Improving the Academic Performance of Students with Attention Deficit Hyperactivity Disorder

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ARTICLE INFO

Keywords:

*Discipline
Training,
Academic
Performance,
Attention
Deficit
Hyperactivity
Disorder*

ABSTRACT

The current research was conducted with the aim of the effectiveness of discipline training on improving the academic performance of students with attention deficit hyperactivity disorder. Research method: It was a semi-experiment with a pre-test-post-test design with an experimental group and a control group. The statistical population included 340 fourth, fifth and sixth-grade students of Sama girls' primary school in Arak City in the academic year of 2019-2019. The statistical sample includes 30 students with this disorder who were selected by purposeful sampling and were randomly divided into two groups of 15 people, test and control. Students participated in 20 discipline training sessions. To collect information, the questionnaire "Diagnostic Standard of Attention Deficit Hyperactivity Disorder (Savari, 2013)" and "Executive Academic Performance Questionnaire at School (Teachers and School Counselors 2019-2019)" were used. Data were analyzed by one-way analysis of the co-variance test. The findings of the research showed that in the post-test, there is a significant difference between the scores of the experimental and control groups in the academic performance score of homework completion, equipment management, time management, and homework planning. The results of the one-way covariance analysis showed that discipline training was effective in improving the academic performance of students with attention deficit hyperactivity disorder.

Introduction

Attention deficit hyperactivity disorder (ADHD) is one of the most common psychological and neurological problems in children, which is diagnosed in preschool age and usually continues until adulthood (Barkley, 2011 and Fischer). The prevalence of this disorder worldwide for children and adolescents is approximately 3.4% and for adults it is about 5% (2011, et al Wilkat). The studies conducted in Iran have shown the prevalence of this disorder in the country at least 0.95% and at most 17% and the average is 8.7% (Hassanzadeh et al., 2018). It starts to include; It is inattention, hyperactivity and introversion that is contrary to the child's development level and during schooling, it is usually accompanied by avoidance delay and ineffective social skills, motivational problems, inability to tolerate failure and executive functioning (EF) (Ronk, et al. al, 2011) and according to the research conducted among these three signs of disorder; Only the sign of impulsivity has a direct effect on academic progress (Mirdoghi et al., 2015). Children with attention deficit-hyperactivity disorder, despite having normal or high intelligence, usually face problems in education (Habibi et al., 2019: lack of supervision and lack of attention to the organization of time management and planning (OTMP Organization Time Management Planning), lack of organization, time management and planning skills to fulfill school demands and related assignments (Gallagher et al, 2014), high levels of disobedience and aggression, impaired communication with peers (MI Kami, 2010), conflict with parents and teachers, are among these problems, and these children, It has an adverse effect on their behavioral functioning and family relationships, self-confidence, academic and occupational success (even in adulthood) (Skogli et al, 2014). So far, various treatments have been used to reduce attention-deficit-hyperactivity disorder, and these treatments fall into two main categories. There are psychological and pharmaceutical treatments and although stimulant drugs such as Ritalin are used in the treatment of these children, but this drug has not been able to have a significant effect on reducing the symptoms of this disorder and memory and executive function ((2014, Coghill & et al), (Hamzah) Nejad and colleagues, 1400). Most therapists suggest that along with drug therapy, a suitable intervention should be designed on the behavioral skills training methods of these children to facilitate the formation and use of efficient behaviors and increase the motivation and academic progress of students with this disorder. (Zare et al., 2015). Organization skill training (OST), one of these cognitive therapy methods, is in four general areas (task tracking, resource management, time management, and homework planning), which children with attention deficit hyperactivity disorder can efficiently Manage essential tasks related to academic performance and learn to minimize their performance consequences. Also, this training focuses on improving skills related to discipline performance in real-life situations and on the relationship between the situations that arise and the specific skills that should be used in these situations. It is effective and provides logical reasons and how to use each skill. In addition, by emphasizing the engagement strategy, including the use of the "parasite" metaphor, the problems that children face in school and in dealing with their peers, parents, and teachers have become concrete, facilitating joint efforts and preventing resistance and disappointment.

Until recently, few systematic and systematic treatments have directly targeted discipline functions in children with attention deficit hyperactivity disorder. In addition, most of the work is aimed at improving academic performance. For example;

Power et al., 2012) designed a homework solutions program. In the research conducted by Gallagher and Abikoff (2013) entitled "Improving Organizational Performance in Children with Attention Deficit Hyperactivity Disorder: Immediate and Long-Term Effects of a Randomized Controlled Trial", they concluded that these children, in terms of performance Education, skills, homework and family functioning improved, and children's organizational skills improved significantly with treatment, and the gains were maintained in the 5-month follow-up.

The use of virtual reality in the treatment of these children causes the students to be immersed in the learning experience, to fully engage them with the educational materials, to increase the level of concentration and accuracy, and instead to reduce their impulsiveness and increased movement (Tabrizi et al., 2019). Although many of these methods have had positive effects, they also have experimental and practical limitations: 1- Most of the time, successful reports are based on a very small number of children, and their effectiveness has not been proven in randomized controlled

trials. 2- Many of these interventions cannot be easily implemented by therapists unless they are employed in school. 3- Most importantly, the implementation of some of these approaches for children who have discipline problems is insufficient and limited. But the disciplinary training program is based on a planned set of clinical research that has lasted for more than a decade, which has been accompanied by randomized clinical trials, and it improves children's disciplinary skills by using behavioral skills training methods designed for elementary school children. Teaching discipline skills follows a logical sequence of what should be done to complete homework and academic needs. Based on the conducted research, the behavior of children with attention deficit and hyperactivity disorder is especially challenging for parents, caregivers and teachers and leads to stress. For this purpose, parent training can be used as an efficient method to improve the self-control of these children by modifying the interactive and parenting pattern of parents of children with attention deficit hyperactivity disorder and minimize problems and prevent long-term damage (Yaghmaei et al., 139). On the other hand, teachers state that the inability to implement disciplinary behaviors can even reduce the academic performance of gifted students and reduce the performance of top students with attention deficit hyperactivity disorder (2011, Whiteman and Assoulin). Therefore, teachers should also be involved in the treatment in order to understand the sequence of treatment and to know which activities children should encourage and reward each day at school and have an important role to provide reports about the daily record, not whether the child uses the activities in question. Or not, for parents, so that parents can integrate schoolwork into a home-based behavior management program.

The combination of play therapy and management training for parents and teachers, which is part of the discipline training program, is effective in reducing the symptoms of attention deficit hyperactivity disorder and because games are the most enjoyable, engaging and effective way to train today's learners and to some extent cognitive abilities. These children are corrected and by motivating them, they learn to cope with challenges and overcome obstacles and have better academic performance, increasing self-esteem and reducing anxiety and depression in these children (Faizullahi et al., 2019). In general, discipline training can be useful not only for children with problems of organization, time management and planning, but also for children who are not affected and have defects in the organization of time and equipment, and it can bring about small changes in some materials and performance. To improve the education of such students. According to the background and materials presented, the aim of this research was the effectiveness of discipline training on improving the academic performance of female students with attention deficit hyperactivity disorder in Sama elementary school.

1. Research method

2.1- Research design, statistical population and sampling method

The research design was semi-experimental (pre-test-post-test design with control and experimental groups). The statistical population included 340 fourth, fifth, and sixth grade students of Sama Girls' Primary School in the academic year of 2019-2020 in Arak city. The sampling method was purposeful, as follows. In order to conduct this research, first of all, a questionnaire "Standard for diagnosis of attention deficit hyperactivity disorder" (Savari, 2013) was given to the students after approval from the Department of Education and the first district and the approval of the school principal. After examining the questionnaire and presenting the names of 40 students with attention deficit hyperactivity disorder to the school counselor and consulting with them, among the names selected based on the questionnaire and examining their medical records, 30 of these students who have attention deficit hyperactivity disorder It was determined in them and they formed the sample size, which was randomly divided into two experimental and control groups, each group consisting of 15 people.

1.2 Procedure

In the present study, the researcher examined and researched the family and educational background of students with disorders and interviewed the families, students, and teachers of the students. Partly done. While there was no intervention for the control group. Disciplinary skills training sessions

were conducted once a week for 20 60-minute sessions. After the interventions, the post-test was taken from the experimental and control groups. Then the collected data were analyzed.

Table 1-Summary of disciplinary training

Acquaintance of parents and children. Assessing the problems of organizing time management and academic planning and briefly reviewing the goals of treatment sessions. Descriptions of the jamming pattern ("Go on, it doesn't matter" related to (task rejection) "Go on, let go." related to (managing stuff). Time stealer related to (time management) "Go ahead don't plan" related to (homework planning) and the internal observer of the brain (common sense) their effects on individual performance and the distraction and irregularity of these children and providing a solution.	meetings First
Using social learning strategies in order to stimulate the creation of skills and implement behavior management methods to parents in order to motivate and encourage children and to give varied and rotating rewards in order to prevent fatigue from the program	Second
Using social learning strategies in order to stimulate the creation of skills and implement behavior management methods to parents in order to motivate and encourage children and to give varied and rotating rewards in order to prevent fatigue from the program	Third And Fourth
Equipment management: preparing the work desk to start the task, (all necessary equipment available and putting away extra objects), checking the daily schedule about tracking assignments and sorting sheets, creating a contest titled "My clean room" and familiarizing yourself with Checklist of the meeting backpack, miscellaneous items. Persuasion and encouragement and rewards by parents and teachers continuously at the time of collecting sheets and materials and preparing the desk by the child.	the fifth Sixth the seventh ,Eighth ninth
Time management: Knowing time and calendar. Tracking time for homework. Time planning sessions at school and home. Time planning for long-term assignments and daily tasks and avoiding distractions.	Ten , Eleven, Twelve, Thirteen, Fourteen
Homework planning: Familiarity with time planning: dividing a task into main steps, ordering the steps, including these steps in the timetable to finish the homework on time and plan for the end of the training course. Encouraging the child by the parents by holding a daily meeting of homework planning and using steps. Contact with teachers: guiding time planning in time planning meetings and encouraging, monitoring and encouraging the use of time management skills in school. Writing assignments creatively and turning longer assignments into smaller units	fifteen, Sixteen, seventeen, eighteen and nineteen
Program Summary: A review of all the skills learned during therapy and ways to continue using these skills. At the end of the recording, a personal "announcement" by the child about lessons from the therapy.	Twenty

3.2. Measuring tool

2.3.1. Attention Deficit Hyperactivity Disorder Diagnosis Questionnaire by Sawari (2013): It was designed and developed to measure the diagnosis of Attention Deficit Hyperactivity Disorder in children (7-11 years old). This questionnaire has 35 questions and five components of memory and attention deficits, responsibility and organization, non-targeted movements, cooperation with others and impulsivity, and it is based on a four-point Likert scale (never 1, sometimes 2, most of the time 3, always 4) to measure the diagnosis of the disorder. Attention deficit hyperactivity disorder. In this way, he first distributed the questionnaires among his community and after completing the questionnaires, he entered the data into SPSS software. To calculate the score of each subscale, the

score of each item related to that subscale is added together. The score range of this questionnaire was between 35 and 140. The reliability of the test in this questionnaire is estimated based on Cronbach's alpha coefficient above 0.7.

2.3.2 Executive academic performance questionnaire in school: based on disciplinary training at the levels of homework tracking, time management, equipment management, homework planning, in order to determine how academic performance works, after disciplinary training to students with attention deficit hyperactivity disorder, this questionnaire in school It was designed and compiled by teachers and consultants. This questionnaire has 16 items and 4 components; It was task tracking, time management, equipment management and task planning and it was calculated as a descriptive evaluation in four levels (needs effort 1, acceptable 2, good 3, very good 4). In this way, the questionnaire was given to the parents and teachers of the students with this disorder in the pre-test and post-test stages, and after completing the questionnaire, they entered the data into the SPSS software. The higher the score obtained from this questionnaire, it will indicate the improvement of academic performance at the desired level in students with attention deficit hyperactivity disorder.

3. Findings

The descriptive findings of this research include statistical indicators such as frequency of data, average, standard deviation for the variables studied in the research. In order to test the research hypotheses, one-way analysis of covariance (ANCOVA) test was used for the general hypothesis.

Table 2- Descriptive index related to the comparison of the average academic performance of the two groups in the pre-test and post-test phases

After the test standard deviation	After the test Average	pre-exam standard deviation	pre-exam Average	
1/77 1/69	8 4	1/68 1/86	4/20 3/93	Academic Performance (assignment tracking) the experiment witness
1/33 1/3	9/33 3/80	1/63 1/37	4/13 3/80	Academic Performance (Time Management) the experiment witness
2/07 2/92	8/73 8/06	3/19 2/75	5/47 10	Academic Performance (device management) the experiment witness
1/18 3/34	9/87 8/80	3/30 3/14	5/46 7/80	Academic Performance (assignment planning) the experiment witness
8/16 2/59	35/93 26/99	5/48 9/12	20/26 25/53	Academic Performance the experiment witness

The data in Table 2 shows the mean and standard deviation of the research variables in the experimental and control groups in the post-test and pre-test. The average scores of the post-test generally decreased in the experimental group compared to the pre-test, while we did not observe this decrease in the control group. This statement is also true about the dimensions of academic performance in different fields separately. The post-test scores of academic performance in the experimental group have increased compared to the pre-test. While we do not observe this increase in the control group.

Table 3: Summary of one-way covariance analysis for intervention effects on academic performance variables (assignment tracking, time management, equipment management, assignment planning) with variable control

Ita coefficient	Sig	F	mean square	Degrees of freedom	sum of squares	Source of changes
						Academic Performance
			11/84	1	11/84	Dispersion
0/830	0,0001	3/150	496/13	1	496/13	main effect
			175	27	101/491	Residual error of the model
						Tracking assignments
			31/680	1	31/680	Dispersion
0/377	0/0001	16/349	755/705	1	755/705	main effect
			1/93	27	52/320	Residual error of the model
						Device management
			34/938	1	34/938	Dispersion
0/550	0/0001	6/527	176/420	1	174/420	main effect
				27	14/529	Residual error of the model
						Time Management
			14/820	1	14/820	Dispersion
00/975	0/0001	11/594	1330/077	1	1330/077	main effect
				27	34/513	Residual error of the model

			60/474	1	60/474	Assignment planning
0/868	0/001	14/053	764/539	1	764/539	Dispersion
			4/303	27	116/193	main effect
						Residual error of the model

In Table 3. As can be seen, the calculated F ratio is significant for all dependent variables. In other words, the results state that by removing the effects of academic performance scores in different fields, the pre-test as a covariate, the main effect of education on academic performance in the post-test fields is significant. The ETA coefficient shows that the effect of training accounts for 37% of the variance of academic performance (rejecting assignments), 97% of the variance of academic performance (management of resources), 55% of the variance of academic performance (management of resources), 37% of the variance of academic performance (planning homework)) and determines 83% of the variance of the academic performance variable.

4-Discussion and conclusion

The purpose of this research was to investigate the effect of discipline training on reducing the symptoms of attention deficit hyperactivity disorder in children and improving their academic performance, and it was attempted to teach discipline in four levels (task tracking, equipment management, time management, homework planning) to children with This disorder and its repetition and practice for 20 sessions will strengthen their memory and these students will improve their skills in various fields and academic performance by designing the appropriate educational methods of teachers and therapists and make them capable in facing situations. and the problems they face during their life. Such a goal is not only achieved by drug treatment or maintaining children's learning rules, but also by teaching control, managing children's behavior and strategies to deal with people and tasks that help them in their daily functioning, making this possible. By continuing education and training by parents and their children in a logical and step-by-step way, children can handle assignments and problems and discipline is institutionalized as a good habit in their existence. According to this goal, the children were trained and supervised in two experimental and control groups. The findings of the research showed that in the post-test, there is a significant difference between the scores of the experimental and control groups in the academic performance of homework tracking, equipment management, time management, and homework planning. According to the results of these materials, it can be said that the discipline training program in these four areas has been effective for students with attention deficit hyperactivity disorder with the cooperation of parents and teachers. The results of the one-way analysis of covariance test showed that discipline training has an effect on improving academic performance in students with attention deficit hyperactivity disorder. Therefore, the above results are in line with the results of previous researches that have examined the effectiveness of various trainings and methods on reducing the problems of children suffering from attention deficit hyperactivity disorder or improving their academic performance. For example, researches and trainings by; Khorasanzadeh Gazki et al., 2018 (Noorani et al., 2020) (Kofier et al., 2020)), (Young and Smith, 2017) (Bunger et al., 2021) have been conducted in relation to executive functions and attention deficit hyperactivity disorder. It showed that the training of all or part of the executive functions (which includes self-management, behavioral discipline, impulse inhibition, and behavioral planning and phasing) has a significant effect on the academic performance of people with this disorder and plays a role in predicting their academic achievements.

Also, in the research they conducted (Zendarski & et al, 2020), they stated; Placing changeable factors in the quality of teacher-student communication is one of the ways to improve school performance for at-risk children and their teachers and promotes good social behavior in classrooms. The current research is also related to the necessity of education for parents and teachers and

children with attention deficit hyperactivity disorder and the same opinion with previous researches. It seems that having the necessary knowledge and information can reduce the worry and anxiety of parents and teachers who are in direct contact with hyperactive children, and at the same time correct their false beliefs and documents, and finally, the field of promotion and development of talents and abilities. Provide them individually. One of the effective strategies in the field of empowering students, which leads to the improvement of their reading capacity, is the teaching of metacognitive strategies (which is stated in this research in the task tracking section). Reading skills are necessary for almost any position in any field and can play a significant role in the success of people in their future education and career skills.

It seems that the method of using the work folder, collecting things and creating a competition between students and putting pictures of their tidy room and their desks in class groups and recording the things needed to do the homework and creating a table and controlling the "go ahead and let go" noise for These children have been effective in doing their work and organizing them, which has satisfied the parents and the child himself. The researcher creates and draws a table that includes; The personal practice table of duration, time planning table, personal calendar table and assigned homework table (let's imprison the time thief) as well as the researcher's effort to develop the skill of reading the clock by children, control the time management of students with attention deficit hyperactivity disorder. has been

By teaching a variety of learning styles and proper planning and encouragement appropriate to the conditions, by parents and teachers to children with attention deficit hyperactivity disorder, the skills and learning of these children will improve, and when students become aware of their learning processes, they can increase their metacognitive strategies. and turn their goals into smaller steps that will make it easier for them to achieve them, give order to these steps and prepare a timetable for doing assignments and finishing them, which will improve their academic performance

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