



Research Paper

The Effect of Planning a Family-based Sensory Diet on Children With Attention-Deficit/Hyperactivity Disorder



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The authors declared no conflict of interest.

ABSTRACT

Background and Objectives: The present study was conducted to determine the effect of a family-based sensory diet program on children with attention-deficit/hyperactivity disorder (ADHD). In this program, parents were directed to use activities stimulating the vestibular, deep, tactile, visual, and auditory senses to maintain the children's focus and organized consciousness.

Methods: This research was a quasi-experimental study with a Pretest-Posttest design with an experimental group. Wechsler Intelligence Scale for Children (WISC-IV) and Conners' parent rating scale were used to measure the study variables. The study's statistical population included all children with ADHD aged 6-12 years referred to Haŕti, Bahar, and Masir-e Sabz health clinics in 2020. Of them, 30 participants were selected through a convenience sampling method.

Results: Based on the analysis of covariance (ANCOVA), the obtained F values of attention deficit and hyperactivity were significant at a level less than 0.05. So the test hypothesis is accepted, and family-based sensory diet sessions effectively reduce ADHD symptoms in these children.

Conclusion: According to the findings and the degree of effectiveness, implementing the sensory diet program by the child's family can effectively reduce ADHD symptoms.

Keywords: Family-based sensory diet, Attention deficit, Hyperactivity



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↑ *What is “already known” in this topic:*

Therapists have used many sensory-based interventions to manage a variety of disorders, including ADHD, but the sensory diet was not deliberately considered as a separate treatment from other sensory interventions.

→ *What this article adds:*

The sensory diet program in this study was based on the Wilberger Sensory Diet Framework, which was used repeatedly as part of children's daily life routines at different times of the day. The family can have more favorable effects.

Introduction

Attention-deficit/hyperactivity disorder (ADHD) is one of the most widespread psychological and neurological disorders during childhood, which has been the focus of many researchers. This disorder is characterized by repetitive episodes of hyperactivity, impulsiveness, and inattention which often begin before the age of seven and are more severe than can be attributed to average growth. In the USA, ADHD affects the life of 3.5% to 5% of children [1]. Furthermore, it is more prevalent in male children, and, in some cases, the hyperactivity disappears, but attention deficit and impulsiveness remain. Accordingly, the academic achievement of these people is less than other normal people [2]. This disorder could damage normal functions such as academic achievement, school behavior, family interaction, and peer communication. As a result, these children may be rejected by their peers and society [3]. For these reasons, finding effective treatments and strategies to prevent the aggravation of these children's problems is one of the main goals of research in this field.

Among the various treatments, the effect of sensory integration therapy has already been analyzed and proven [4]. This therapy includes controlled sensory stimuli in the context of self-controlled and significant activities to improve some behavioral, motor, educational, and oral functions and skills of children (especially children with learning disabilities, autism, and attention deficit hyperactivity disorder).

Various pharmacological, cognitive, behavioral, combinatory, and complementary therapies are used to treat children with ADHD. Sensory integration is one of these therapies. Sensory integration therapy includes controlled sensory stimuli in the framework of self-directed and meaningful activities that cause an adaptive response. In addition, the therapy acts through the inte-

gration of sensory inputs of some behavioral, motor, academic, and language functions and skills of children [5]. The integration of different sensory information increases the ability of the children in sensory-motor and perceptual-motor functions. As a result, it empowers the child in different aspects. Sensory integration helps the children's control power which consequently gives their nervous system the ability to change and keep the stimulation level necessary for the development of abilities, such as paying attention to homework, controlling impulses, increasing failure tolerance, and balancing emotions [6].

In the Rathod et al. study, the results showed that sensory integration therapy by itself and in combination with cognitive-behavioral therapy had a significant effect on reducing ADHD symptoms based on Conner's scale [7]. Similarly, Ebrahimi et al. conducted a study entitled “the effect of sensory integration with an emphasis on deep and superficial senses on the academic progress of 6- to 12-year-old-children with ADHD in Semnan City.” In this study, 32 students diagnosed with ADHD were chosen and divided into the intervention and control groups (each with 16 members). The results indicated that sensory integration with an emphasis on deep and superficial senses affects the academic achievement of students with ADHD [8].

Peterson et al. (2018) conducted a study entitled “Providing Sensory Diet by California Occupational Therapists.” The results show that a sensory diet in children with ADHD has positive effects on reducing abnormal behaviors, increasing domains of attention, and the level of mental retention [9].

Rahmani et al. examined the effect of sensory integration therapy in reducing ADHD symptoms. The study results show that children who received sensory integration therapy reported a significant improvement in their primary ADHD symptoms compared with the control group [10]. Similarly, Sahoo et al. established that sensory diet

therapy based on sensory integration theory significantly affected the functional behavior of ADHD children [6].

Amrovan, in the results of her dissertation entitled “The effectiveness of sensory integration on executive actions of children with attention deficit hyperactivity disorder,” argued that the performance of the experimental group significantly improved compared to the control group in the components of response inhibition, sustained attention, and working memory [11]. Ebrahimi et al. examined the effect of sensory-motor integration activities on the symptoms of ADHD. Such activities reduced attention deficit, hyperactivity, and impulsivity in the participants [8].

Considering the high prevalence of ADHD in school children and its consequent problems in different aspects of their personal and social life, the importance of early intervention in these cases, the effectiveness of sensory integration therapy in improving different functions of children, and finally, a few studies on the effect of sensory integration therapy on improving the symptoms in ADHD patients, we intended to answer whether planning a family-based sensory diet can be effective on ADHD symptoms of these children.

Materials and Methods

The present study is applied research in terms of purpose and quasi-experimental in terms of methodology with a Pretest-Posttest design. The study’s statistical population included all children with ADHD aged 6-12 years living in Tehran City, Iran, who were referred to Hašti, Bahar, and Masir Sabz treatment clinics during the last quarter of 2020. The samples were selected by convenience sampling after confirming their ADHD criteria by performing Conners’ test (1973) and meeting other inclusion criteria.

The participants’ parents were then subjected to 12 sessions of comprehensive family-centered program training; after the program, the Posttest was performed, and the results were statistically analyzed (Table 1).

Contents of the Family-based Sensory Diet

The therapist implemented this program for 1 month, 3 sessions per week, and each session lasted 45 minutes. In this program, the parents were guided towards activities stimulating vestibular, deep, tactile, visual, and auditory senses to maintain the children’s focus and organized consciousness.

The summary of the sensory diet practices given to the participants was as follows.

In each therapy session, 5 to 6 exercises were practiced with the children; as each child progressed, other exercises were applied, or their difficulty increased in subsequent sessions. At the end of the intervention, the subjects underwent the Posttest.

Study tools

Wechsler’s Intelligence Scale for Children:

In the present study, we used the fourth edition of Wechsler’s intelligence scale for children, published in 2003. In this edition, total intelligence and four different intelligence subscales are measured, including verbal comprehension (similarities, words, comprehension, general information, verbal deduction), cognitive deduction (designing with squares, visual concepts, visual deduction, and completion of images), active memory (the breadth of figures, sequence of letters, numbers and calculation completion) and speed of processing (cryptography, symbolization, complementary line drawing). Sadeghi, Rabeei, and Abedi analyzed the validity and reliability of the fourth edition of Wechsler’s intelligence scale. The results of the validity between this scale and Raven’s progressive matrices showed a significant correlation between the two scales. The validity of the test was calculated by two methods of halving and retesting, during which the validity of the subscales with the retest was obtained from 0.80 to 0.88, and the validity coefficients of the halving were from 0.83 to 0.91.

Conners’ Questionnaire

The Conners’ scale measures attention deficit, hyperactivity, and impulsiveness. It is one of the common tools used for measuring children’s behavior based on a dimensional classification system. It contains various behavioral questionnaires designed for children. Connors introduced a 93-item scale in 1973. Then a short form of this scale with 48 items was introduced by Goyt, Connors, and Elvish in 1978. Conners’ classification scale was first designed to evaluate the effect of stimulant drugs on children with ADHD and to distinguish these children from normal children. Today, a modified questionnaire consisting of 27 items is used to diagnose children with ADHD. The reliability coefficient of the retest for the total score is 0.58, the Cronbach alpha coefficient for the total score is 0.73, and its validity is 0.84, which measures three factors of oppositional behavior, hyperactivity, and attention deficit. The range of scores

Table 1. Objectives and Contents of Educational Program (Teresa Garland, 2016)

Sessions	Contents	Objectives
One	<ol style="list-style-type: none"> 1. Consultation between the family and therapist for evaluating the sensory diet 2. Using a timetable and a specific plan 3. Teaching and correcting environmental stimuli: Filtering visual and auditory stimuli, Scheduling times at the desk (15 minutes' work with frequent resting interval), Having a place for serenity 	Getting familiar with the family and introducing the work process and the atmosphere in which the child is going to practice
Two	<ol style="list-style-type: none"> 1. Deep massage before the class with a foam roll (5 minutes) 2. Walking with sandals that have a slippery surface 3. Wearing a heavy vest and basketball cap for sitting in class 4. Sitting on a rocking chair during the class 	Receiving vestibular and deep sensory stimuli
Three	<ol style="list-style-type: none"> 1. Planning jumping twice a day before starting homework or class (10 minutes) 2. Planning sitting on a yoga ball and talkativeness twice a day (10 minutes) 3. Walking in a serene place with dust or playing with sand twice a day 	Using visual and vestibular inputs
Four	<ol style="list-style-type: none"> 1. Listening to light music with headphones while doing the homework (the written homework) 2. Chewing gum while doing written homework 3. Sitting on a ball chair while reading and memorizing materials 4. Doing yoga once a day 	Using vestibular and visual inputs
Five	<ol style="list-style-type: none"> 1. Leaning on a pillow for elongation of sitting at the desk time 2. Pressing jelly ball while listening to class 3. Going into a sleeping bag (once a day in the afternoon for 15 minutes) Playing with a cloud mattress (in the afternoon for 10 minutes)	Stimulating deep sense and increasing tolerance
Six	<ol style="list-style-type: none"> 1. Doing heavy physical exercises (20 minutes before doing homework, like vacuuming) 2. Gathering together in an enclosed area and doing homework 3. Playing with a skateboard Moving things in class is on the child	Deep sensory exercises
Seven	Reevaluating the function and sensory diet	Evaluating the improvement
Eight	<ol style="list-style-type: none"> 1. Dancing twice a day (before the class starts, for 15 minutes) 2. Visual exercise through visualizing growing circles (once in the afternoon, before starting the homework) 3. Pressing sponge in a water dish 4. Throwing oneself on a mattress (once every ten minutes, in the afternoon) 	Stimulating deep senses
Nine	<ol style="list-style-type: none"> 1. Rope games (every morning for 10 minutes) 2. Crawling on the ground at home (once a day in the afternoon, 10 minutes) 3. Going up and down a suspended ladder and repeating the homework one has to memorize 4. Listening to recorded educational materials and walking on the straight lines of the carpet simultaneously 	Vestibular and improving the interaction between brain hemispheres
Ten	<ol style="list-style-type: none"> 1. Ball playing with wall while changing the distance (twice a day) 2. Going into Swedish swimming model and staying in that model for 5 minutes (twice a day) 2. Doing structural puzzle activity (once a day) 4. Playing on the swings and repeating the educational material (in the afternoons) 	Using visual and vestibular inputs
Eleven	<ol style="list-style-type: none"> 1. Keeping balanced on an unstable surface (twice a day, in the mornings) 2. Cutting narrow lines from a paper with scissors 3. Drawing ropes with two hands simultaneously 4. Bicycle riding (once a day, in the afternoons) 	Deep sensory and balance exercises
Twelve	<ol style="list-style-type: none"> 1. Reevaluation 2. Conclusion 	Complimentary evaluation of the students

Table 2. Frequency Distribution and Frequency Percentage of Sample Size in Terms of Maternal Education

Maternal Education	No. (%)	Cumulative Frequency, %
Diploma and lower level	9(30)	30
Bachelor's degree	14(46.7)	76.7
Master's degree and higher	7(23.3)	100
Total	30(100)	

Table 3. Frequency Distribution and Percentage of Sample Size According to the Employment Status of Mothers

Employment Status of Mothers	No.(%)	Cumulative Frequency, %
Employed	16(53.3)	53.3
Housewife	14(46.7)	100
Total	30(100)	

for each question varies from 0 to 3 as follows: 0) not true at all (never), 1) only slightly true (occasionally), 2) relatively true (often), and 3) absolutely true (very high).

Results

According to [Table 2](#), there were 9 mothers with a diploma, 14 with bachelor's, and 7 with master's or higher degrees.

According to [Table 3](#), there were 16 employed mothers and 14 homemakers.

According to [Table 4](#), 9 students were between 6 to 8 years old, 11 were between 8 and 10 years old, and 10 were between 10 and 12 years old.

The first hypothesis was that a family-based sensory diet program is effective for the attention deficit of ADHD children.

Based on the [Table 5](#), since $F_{1,27}=56.932$ achieved a significant level (0.000) less than 0.05, the test hypoth-

esis is accepted, and we can conclude that sessions of family-based sensory diet program have been effective on attention deficit of ADHD children.

The second hypothesis was that a family-based sensory diet program is effective on the hyperactivity of children with ADHD.

Based on [Table 6](#) and [Table 7](#), since $F_{1,27}=64775$ achieved a significant level (0.000) less than 0.05, the second test hypothesis is accepted, and we can conclude that sessions of family-based sensory diet program have been effective on reducing hyperactivity in children with ADHD.

Discussion

We used the analysis of covariance to test the research hypothesis, i.e., the family-based sensory diet program is effective on attention deficit and hyperactivity of children with ADHD.

Based on the results (regarding the first hypothesis), there is a significant difference between Pretest and Post-

Table 4. Frequency distribution and frequency percentage of sample size according to the children' age

Students' Age	No. (%)	Cumulative Frequency Percentage
6-8 years old	9(30)	30
8-10 years old	11(36.7)	66.7
10-12 years old	10(33.3)	100
Total	30(100)	-

Table 5. Descriptive data of children's attention deficit and hyperactivity variables in the Pretest and Posttest

Variables	Stages	Mean±SD	Min	Max	No.
Attention Deficit	Pretest	39.47±5.18	31	47	30
	Posttest	35.40±5.46	27	44	30
Hyperactivity	Pretest	16.87±2.20	12	20	30
	Posttest	11.8±2.11	7	14	30

Table 6. Single Variant analysis of covariance for investigating the effect of family-based sensory diet program on attention deficit of children with ADHD

Source of Changes	Total Squares	Degree of Freedom	Average Squares	F	Sig.	Effect Size
Pretest	681.503	1	681.503	399.168	0.000	0.937
Group	97.200	1	97.200	56.932	0.000	0.678
Error	46.097	27	1.707	-	-	-
Total	42340	30	-	-	-	-

test scores of the attention deficit in the subjects. In other words, the family-based sensory diet program reduces attention deficit symptoms of children with ADHD.

The results of this study are consistent with the finding of Niklasson et al. and Vandenberg, which showed the effect of using sensory stimulation on attention functions of ADHD children [12, 13]. Also, the above results are consistent with the results of the study conducted by Salamati et al., who examined the effect of sensory stimulation in the form of atrial stimulation in children with ADHD. Hence, its effectiveness on the attention and auditory abilities of these children was proved [14]. The effect of sensory integration therapy in improving attention deficit of ADHD children does not agree with the study conducted by Ghareh Baghi et al., in which the effect of sensory stimuli on attention function of children with learning disorders was analyzed [15]. This differ-

ence might be because, in the above study, deep sensory stimulation was used in the form of only a vest and saddle in occupational therapy sessions. According to the sensory integration principles based on a combination of three proximal sensory systems, this effectiveness is disapproved. Moreover, the lack of enough samples in their study can be another reason for such disapproval.

In explaining this finding, one can say that these problems, along with attention deficit hyperactivity disorder, like disability in motor functions, attention deficit, learning disorder, aggression, educational problems, motor arousal, and apathy, are worth paying attention to [16, 17]. The problems in sensory integration like unfit physical condition, weak visual responses, and unnatural muscular consistency affect body scheme and bilateral and coordinated use of body members. These problems are due to weak processing and integration of received data

Table 7. Single variant analysis of covariance for investigating the effect of family-based sensory diet program on hyperactivity of children with ADHD

Source of Changes	Total Squares	Degree of Freedom	Average Squares	F	Sig.	Effect Size
Pretest	61.950	1	61.950	29.631	0.000	0.523
Group	135.428	1	135.428	64.775	0.000	0.706
Error	56.450	27	2.091			
Total	6047	30				

from a deep vestibular sense. This weakness in processing the information can cause motor aversion or motor fear, reduction in motor range, reduction in domains of attention, and a lack of emotional stability. Additionally, some problems may also be observed in their tactile system. The outcome of all these problems are reactions we will see in therapy sessions: low concentration, irritability, unmotivated, and unorganized behaviors [17].

Hyperactivity is one of the more prominent problems of children with ADHD in whom the brain function is problematic in different aspects, and disorder in the right hemisphere and its injury, basic brain complex, and also prefrontal cortex can cause a reduction in motor functions and hyperactivity. On the other hand, the thalamus is effective in the integration of sensory input data, which, based on the definition by Ayres, sensory integration is the theory of the relationship between the brain and behavior. Dolin et al. believed that this process provides the basis for accurate sensory cognition and, consequently, appropriate motor reactions [8]. A sensory diet that improves the central nervous system in processing the information can improve these children's symptoms, which can be reduced to a high level through early diagnosis and appropriate intervention methods for treating this disorder [18].

Based on the results (regarding the second hypothesis), there is a significant difference between the Pretest and Posttest hyperactivity scores in the test group. In other words, a family-based sensory diet program reduces the hyperactivity of children with ADHD.

The results of the current study were consistent with a study by Batara et al. That examined the effectiveness of sensory stimulation on improving ADHD symptoms [19]. The results showed that sensory stimulation significantly affects three main symptoms of ADHD [19]. Besides, these results are consistent with the results of the study by Ebrahimi on the effectiveness of sensory integration therapy on attention deficiency and hyperactivity of children with ADHD [4].

To explain the effect of sensory integration therapy on children with ADHD, we can say that attention deficit is one of the most obvious and biggest problems of these children. Attention deficit causes children to have problems in controlling different stimuli and responding to merely one of these stimuli in an inappropriate way. The integration of deep and vestibular senses affects the function of the upper levels of the brain, which are responsible for excellent processes such as attention, and improves the organization of children's senses receiving

from the environment and stimuli. So that the spatial and temporal aspects of sensory processing data are processed, interpreted, related, and incorporated. Then, the brain chooses, improves, controls, and compares the data and integrates them in a flexible and changeable sample [4].

Ethical Considerations

Compliance with ethical guidelines

This study was extracted from PhD dissertation. An ethical approval was obtained from the Ethics Committee of Islamic Azad University, Science and Research Branch (Code: IR.IAU.SRB.REC.1400.155). Prior to study, written and verbal consent was obtained from the participants and they were assured of the confidentiality of their information. Iranian Registry of Clinical Trials (IRCT): IRCT20220214054020N1.

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Authors' contributions

All authors equally contributed to preparing this article.

Conflict of interest

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References

- [1] Bakhshi S, Najati V, Rezayi S, Hekmati I. [Epidemiology of Attention Deficit/ Hyperactive Disorder among third grade primary school students of Rasht (Persian)]. *Hakim Res J*. 2012; 14(4):203-10. <https://www.sid.ir/en/Journal/ViewPaper.aspx?ID=261715>
- [2] Mash EJ, Wolfe DA. *Abnormal child psychology*. Boston: Cengage Learning; 2015. <https://books.google.com/books?hl=en&lr=&id=ZjIBBAAQBAJ&oi=fnd&pg=PT6&dq>
- [3] Liaghat R, Bagheri A, Bayat S, Melali M. [The efficiency integration treatment method over performance of working memory and processing speed in children with attention deficit hyperactivity disorder (Persian)]. Paper presented at: International Conference on Psychopathological Culture

- and Education. Type of conference: Scientific Associations Sponsor: Iranian Psychological Association, Al-Zahra University; 2017, Vol 1 2017. <https://www.sid.ir/fa/seminar/ViewPaper.aspx?ID=85528>
- [4] Ebrahimi M. [Effectiveness of sensory integration with emphasis on deep and superficial senses on Attention Deficit/ Hyperactivity Disorder (Persian)] [PhD. dissertation]. Tehran: Tehran University of Social Welfare and Rehabilitation Sciences; 2012.
- [5] Sabet Sh. [The effect of Sensory Integration and Nervous-Growing Approach on Delicate Skills in Children with Spastic Diplegia Brain Damage (Persian)] [Phd. dissertation]. Tehran: Tehran University of Social Welfare and Rehabilitation Sciences; 2010.
- [6] Kumari Sahoo S, Senapati A. Effect of sensory diet through outdoor play on functional behaviour in children with ADHD. *J Physiother Occup Ther.* 2014; 46(2):49-54. <https://www.aiota.org/temp/ijotpdf/ibat14i2p49.pdf>
- [7] Rathod JV, Paranthaman P, Shah V, Alagesan J. Effect of Sensory Integration therapy and Cognitive behavioral therapy on Attention Deficit Hyperactivity Disorder: Single blinded study. *Int J Physiother Res.* 2015; 3(2):947-54. [DOI:10.16965/ijpr.2015.112]
- [8] Ebrahimi M, Wernofaderani AM, Haghgoo HA, Tajrishi MP, Danaiefard F. The effectiveness of sensory-motor integration with an emphasis on proprioceptive and vestibular senses on the symptoms of attention deficit/hyperactivity disorder. *J Rehabil Sci.* 2013; 9(2):220-31. http://jrrs.mui.ac.ir/article_16687.html
- [9] Peterson M, Hunt A, White E. Survey of sensory diet use among california occupational therapy practitioners [Master's Thesis]. California: Dominican University of California. <https://doi.org/10.33015/Dominican.edu/2018.ot.10>
- [10] Rahmani T, Wulandari D. Effectiveness of sensory integration therapy in children with ADHD (Attention Deficit/Hyperactivity Disorder). *Anima, Indonesian Psycho J.* 2010; (26):69-75. <http://www.anima.ubaya.ac.id/class/openpdf.php?file=1372233604.pdf>
- [11] Amrovan M. [The effectiveness of sensory integration on executive actions of the children with Attention Deficit Hyperactivity Disorder (Persian)] [MA thesis]. Semnan: Semnan University; 2015.
- [12] Niklasson M, Niklasson I, Norlander T. Sensorimotor therapy: Physical and psychological regressions contribute to an improved kinaesthetic and vestibular capacity in children and adolescents with motor difficulties and concentration problems. *Social Behavior and Personality: An International J.* 2010; 38(3):327-45. [DOI:10.2224/sbp.2010.38.3.327]
- [13] VandenBerg NL. The use of a weighted vest to increase on-task behavior in children with attention difficulties. *Am J Occup Ther.* 2001; (55):621-28. [DOI:10.5014/ajot.55.6.621] [PMID]
- [14] Aminjan AS, Hosseini SA, Haghgoo HA, Roostami R. Vestibular stimulation and auditory perception in children with attention deficit hyperactivity disorder. *Iran Re J.* 2014; 12(21):39-42. <https://irj.uswr.ac.ir/article-1-365-en.pdf>
- [15] Gharebaghi S, Mohamad-Jani Z, Sourtji H, Biglarian A. [Effectiveness of Sensory stimulation by weighted vest on motor skills and attention of 6-10 years old children with learning disorders (Persian)]. *RJ.* 2011; 12(2):27-31. <https://www.sid.ir/en/Journal/ViewPaper.aspx?ID=278077>
- [16] Schaaf RC, Miller LJ. Occupational therapy using a sensory integrative approach for children with developmental disabilities. *Ment. Retard Dev Disabil Res Rev.* 2005; 11(2):143-8. [DOI:10.1002/mrdd.20067] [PMID]
- [17] Frahbod M. Occupational therapy in Mental Retardation. Tehran: Exceptional Children Research Center; 2004.
- [18] Horwitz L, Roset S. Helping Hyperactive Kids ? A Sensory Integration Approach: Techniques and Tips for Parents and Professionals Kindle Edition. Hunter House, 2013. Bagdasariyans A, Bagheri Karimi, A. Tehran: Vania Medical Sciences Magazine of Isfahan University. 2007; (29):148. <https://www.amazon.com/Helping-Hyperactive-Sensory-Integration-Approach-ebook/dp/B00LMKZ0HU>
- [19] Chu S, Reynolds F. Occupational therapy for children with Attention Deficit Hyperactivity Disorder (ADHD), Part 1: A delineation Model of Practice. *British J Occ Th.* 2007; (70):372-83. [DOI:10.1177/030802260707000902]

مقاله پژوهشی

تأثیر برنامه رژیم حسی خانواده محور بر کودکان با اختلال نقص توجه/بیش فعالی

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چکیده

مقدمه مطالعه حاضر با هدف تعیین تأثیر یک برنامه رژیم حسی مبتنی بر خانواده بر کودکان مبتلا به اختلال نقص توجه/بیش فعالی (ADHD) انجام شد. در این برنامه، والدین هدایت شدند تا از فعالیت های تحریک کننده دهلیزی، عمقی، لمسی، بینایی و شنوایی برای حفظ تمرکز و آگاهی سازمان یافته کودکان استفاده کنند.

مواد و روش ها این پژوهش یک مطالعه نیمه تجربی با طرح پیش آزمون-پس آزمون بود از مقیاس هوش و کسلر کودکان (WISC-IV) و مقیاس رفتاری کانرز والدین برای سنجش متغیرهای مطالعه استفاده شد. جامعه آماری پژوهش شامل تمامی کودکان ۶ تا ۱۲ ساله مبتلا به ADHD مراجعه کننده به کلینیک های هستی، بهار و مسیر سبز در سال ۲۰۲۰ بود. از بین آنها ۳۰ شرکت کننده به روش نمونه گیری در دسترس انتخاب شدند.

یافته ها بر اساس تحلیل کوواریانس، مقادیر F به دست آمده از نقص توجه و بیش فعالی در سطح کمتر از ۰/۰۵ معنی دار بود. بنابراین فرضیه آزمون پذیرفته می شود و جلسات رژیم حسی مبتنی بر خانواده به طور موثر علائم ADHD را در این کودکان کاهش داد.

نتیجه گیری با توجه به یافته ها و میزان اثربخشی، اجرای برنامه رژیم حسی توسط خانواده کودک می تواند به طور موثر علائم ADHD را کاهش دهد.

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تاریخ انتشار: ۰۷ دی ۱۴۰۰

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رژیم حسی مبتنی بر خانواده، نقص توجه، بیش فعالی



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