

## CORRECTION OF CHILDREN'S BEHAVIOR DISORDERS THROUGH PARTICIPATION IN SEASONAL ACTIVITIES

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### Keywords:

- Physical activities.
- Integrated children.
- Psychiatric disorder.
- Less stimulating environment.
- Attention Deficit Hyperactivity Disorder (ADHD).

### Abstract:

The author of the study presents results of an educational experiment designed to integrate children diagnosed with ADHD and with behavior disorders into educational process. The study deals with potential of an experimental factor implemented to integrate children with behavior disorders and to correct such disorders. Experimental factor consisted of exercises from ISCED 1 within the thematic unit Seasonal activities. The results clearly showed that children's behavior improved in particular dimensions of behavior. The behavior of integrated students improved leading to correction of behavior disorders. The results of educational experiment are supplemented by data collected via NICHQ Vanderbilt ADHD Diagnostic Rating Scale and Strengths and Difficulties Questionnaire (SDQ – Svk). At present, this issue is highly topical and is scientifically investigated within VEGA project 1/0769/13 'Efficiency of specific exercise reeducation procedures designed to correct hyperkinetic disorders in prepubertal children'.

### INTRODUCTION

ADHD (Attention deficit hyperactivity disorder) refers to an attention disorder accompanied by hyperactivity, impulsivity and inattention. Statistics have shown that one in twenty children suffers from such symptoms with more frequent occurrence of such disorder in boys than girls. ADHD is diagnosed through observation of children. Children with ADHD pose a problem during classes by talking without permission, by acting impulsively and by standing from one's seat instead of sitting. Such children are anxious and fail to stay in one place [10]. Attention disorder associated with hyperactivity manifests in a lack of focus, hyperactivity or impulsivity. Problems are more evident when children start school and are unable to succeed due to inability to concentrate and to adjust to class rules.

There are 3 subgroups of ADHD: *Combined group*: children exhibit symptoms of a lack of focus, hyperactivity and impulsivity. Group exhibiting *predominantly inattention*: more inattention symptoms than hyperactivity and impulsivity symptoms. Group exhibiting *predominantly hyperactivity/impulsivity*: symptoms indicate hyperactivity and impulsivity rather than inattention [15].

Improved results of educational effects on such students lead to an educational process in smaller groups. It should be important to focus on the regulation of outside effects of environment, friendly yet uncompromising rejection of undesirable behavior. Teachers should take into account formation of correct habits directed towards regular and personally and socially beneficial students' activity [13].

Approximately 5 to 9% of children aged 5 to 14 years suffer with ADHD [6]. Children diagnosed with attention disorders associated with hyperactivity are easily observable and immediately detectable. Diagnosis of this syndrome is complicated and is researched by

experts in a variety of fields, but the diagnosis is established by neurologists or pedopsychiatrists [7].

Hyperkinetic disorder should be treated as early as preschool age. Upon start of school attendance counselling services are further provided to parents, teachers and educators and children are kept to be monitored. Increasing age is associated with greater mental stress. Students need understanding, help and special leadership [11]. There is knowledge related to when children's conditions may be improved. This depends on the level of hyperactivity, aggression, intelligence and, of course, on the effect of family and on school support. Parents and teachers should follow certain principles when dealing with children with ADHD by predicting problems, repeating instructions, praising more frequently, rewarding, presenting the rules, assigning tasks into smaller units, providing an escape route such as a peaceful place, maintaining an adequate level of stimulation – offering an array of alternative activities, using immediate, frequent and corresponding procedures (when fixing the required forms of behavior, punishments) [15].

Physical activity is a recommended form of therapy and prevention by affecting body constitution and body composition, body weight and processes underlying biochemical, respiratory and motor functions. Physical activity also has effect on state of mind and physical fitness. What should be taken into consideration is child's individuality and correct prescription and control of physical activity whose part is cooperation between family, teacher and other people [12]. One of the most important dimensions for prepubertal children diagnosed with ADHD is movement [4, 5, 6, 14]. These children are recommended to move in nature [8]. Children suffering with this syndrome are mostly less physically fit and in addition to hyperactivity demonstrate lower level of motor skills falling behind their peers in both fine and gross motor skills and even despite hyperactivity their attitude towards movement need not be positive. What is most important is to diagnose the disorder as early as in childhood age and to prescribe the right treatment, which may solve behavior issues and reduce consequences of ADHD in adulthood.

*Integrated students should experience* feeling of social solidarity, responsibility for fulfilling tasks and duties, and sufficient room for opportunity and activity. *Regarding teaching there are certain criteria related to integration:* teacher and school management should acquire basic concepts of integration, there should be cooperation and positive relationships between teachers and school executives, integrated children should dispose of academic and social skills, which are comparable with those disposed of by their peers, identical age group of students, positive attitude towards other integrated children [1].

Physical activities have positive effect on students diagnosed with a hyperkinetic disorder. Engaging in physical activities is beneficial not only for physical condition, but also for mental hygiene of students. Among most appropriate summer season activities contributing to correction of ADHD are swimming, cycling, hiking, and roller skating. Summer season activities are performed outdoors in form of various movement games and activities, be it on a playground, during a walk, such as cycling, riding a kick scooter, cycling, or when playing games using various equipment (balls, jumping ropes, etc.), relay games, etc. [3].

Studies have shown that more regular participation in physical activities has positive effect on prevention and treatment of conduct problems, where even taking medicine by patients dependent on medications decreased [2].

## **THE AIM OF THE WORK**

**The aim of the study** was to extend knowledge about the correction of behavior disorders in prepubertal children through participation in summer season activities.

## **THE MATERIAL AND THE METHODOLOGY**

A sample of 17 integrated children (10 boys, 7 girls), 45 children on the psychiatric ward (32 boys, 13 girls) and 39 children coming from a less stimulating environment participated in an educational experiment designed to correct behavior disorders in children with ADHD. Overall, 101 children aged 7 to 11 years participated in the experiment. Experimental data were collected using questionnaires. The questionnaires concerned personal, family and school anamnesis. Vanderbilt ADHD Diagnostic Teacher Rating Scale NICHQ provides information about a child by assessing his or her class behavior. Teachers filled in the questionnaire before and after the educational experiment. Further information about students was obtained by completion of Strengths and Difficulties Questionnaire (SDQ-Svk). Children participated in an exercise program between pre-testing and post-testing and parents provided informed written consent. Data were collected by investigators upon mutual agreement with school principals and particular class teachers.

## **RESULTS**

Strengths and Difficulties Questionnaire was administered to collect data in 5 dimensions. Integrated students diagnosed with ADHD in the hyperactivity dimension achieved the highest score, which deviates from normal behavior. Such children achieved scores deviating from normal scores also in the dimension of conduct problems. Normal scores were recorded in dimensions regarding peer problems and prosocial behavior (see Table 1).

Upon completion of the exercise program scores in particular dimensions improved. Hyperactivity score and conduct problems score significantly decreased in all selected groups of children. Among the most favorite summer season activities are also physical activities performed on roller skates. Students abode by traffic laws by following and respecting established rules having had to respect their own security and security of others. We hypothesize that moderate changes occurred also in the dimension of conduct problems and students showed more respect towards other people.

Students diagnosed with a psychiatric disorder achieved high scores in dimensions of hyperactivity, conduct problems and prosocial behavior. Students achieved normal scores in the remaining two dimensions. Prosocial behavior of students was assessed as negative and deviant from normal. Upon completion of the exercise program all scores decreased, where hyperactivity score decreased most and scores in other dimensions decreased to boundary or normal values. Participation in physical activities included in the exercise program contributed to moderate correction. Both before and after the exercise program such students were anxious being constantly on the go, squirmed in seats, paid minimal attention, failed to think before acting, and also to fully complete tasks they were assigned. The change occurred during school breaks when students played jumping games such as hopscotch and jumped rope. During physical education classes, roller skating was the most popular activity with students. We assume that these activities contributed to moderate improvement in hyperactive behavior and relaxation of students. During classes to follow students managed to sit in their seats and did not get distracted from assigned activity.

Students from less stimulating environments provided data in five dimensions. Scores in all dimensions both before and after the exercise program were lowest compared to integrated students diagnosed with ADHD and students diagnosed with a psychiatric disorder. Students from less stimulating environments achieved lowest scores also in dimensions of hyperactivity and conduct problems.

Upon completion of the exercise program students' scores from less stimulating environments decreased in four dimensions. Normal score which remained unchanged was recorded in emotional dimension and in dimension of prosocial behavior. Students achieved

boundary scores in dimensions of hyperactivity, peer problems and prosocial behavior. Physical activities based on a social contact resulted in moderate correction, which manifested in showing consideration for others and in willingness to help others. The results showed that students showed interest in physical activities such as riding a kick scooter, which required respecting other children and following rules at the traffic playground (see Table 1).

**Table 1.** Strengths and difficulties questionnaire – scores achieved by particular groups of children

	Group A			Group B			Group C		
	SBEP	SAEP	sig.	SBEP	SAEP	sig.	SBEP	SAEP	sig.
Emotional symptoms	4.49	4.02		4.01	3.09	*	4.25	4.06	
Conduct problems	5.36	3.78	**	5.34	4.11	**	4.76	3.66	**
Hyperactivity	8.29	7.25	*	8.12	6.84	**	7.39	6.35	*
Peer problems	4.59	3.71	*	3.85	3.36		5.14	4.12	
Prosocial behavior	5.15	5.07		4.83	5.69		4.55	5.57	*

**Note:** SBEP – score before the exercise program; SAEP – score after the exercise program; Group A – integrated students with ADHD; Group B – students with a psychiatric disorder; Group C – students from less stimulating environment; sig. - significance

## CONCLUSIONS

Children diagnosed with a behavior disorder or a hyperkinetic disorder benefit most from physical activities they find interesting and attractive. The study has extended knowledge about behavior of prepubertal children and showed that selected seasonal physical activities included in the exercise program had effect on the correction of hyperkinetic disorders. The aim of the study was fulfilled and hypothesis was confirmed.

### Practical implications

Based on the conducted educational experiment teachers are recommended to:

- have a physical activity at hand for integrated students;
- pay more attention to students diagnosed with a behavior disorder;
- engage integrated students into society;
- use methods and game-based and experiential activities.

## REFERENCES

1. Bartík, P. (2002) *Zdravotná telesná výchova I*. Banská Bystrica: PF UMB v Banskej Bystrici.
2. Bartko, D. (1990) *Moderná psychohygienu*. Bratislava: Obzor.
3. Borová, B. et al. (2000) *Cvičení předškolních dětí a rodičů s dětmi*. Praha: Česká asociace Sportu pro všechny.
4. Chovanová, E. (2010) 'Význam netradičných hier a cvičení vplývajúcich na rozvoj priestorovo-orientačnej schopnosti', *Pohybová aktivita v živote človeka: Pohyb detí* [online]. Prešov: PU v Prešove, pp. 52-56.
5. Chovanová, E. (2013) *Pohybová aktivita, šport a zdravý životný štýl*. Trenčianska univerzita A. Dubčeka v Trenčíne.

6. Chovanová, E., Majherová, M. (2013) *Účinnosť netradičných pohybových a športových hier na rozvoj koordinačných schopností žiakov školského veku*. Prešov: Fakulta športu Prešovskej univerzity.
7. Dubayová, T., Chovanová, E. (2013) 'Vanderbiltova posudzovacia škála - možnosť diagnostikovania žiaka s ADHD učiteľom a rodičom', *Špeciálny pedagóg : časopis pre špeciálne - pedagogickú teóriu a prax*, 2 (2), pp. 59-62.
8. Durkáč, P. Chovanová, E. (2013) *Outdoorové aktivity v edukácii*. Prešov: Prešovská univerzita v Prešove.
9. Hučík, J., Hučíková, A. (2010) *Metodické minimum pre pedagóga o ADHD, ADD, ŠPU*. Bratislava: Metodicko-pedagogické centrum.
10. Kirbyová, A. (2000) *Nešikovné dieťa: Dyspraxie a ďalšie poruchy motoriky*. Praha: Portál.
11. Matějček, Z. (1991) *Praxe dětského psychologického poradenství*. Praha: SPN.
12. Ondriová, I., Dučaiová, J. (2010) 'Obezita v detskom veku - možnosti jej prevencie', *Zdravý životný štýl v kontexte výchovy a vzdelávania na školách: zborník*. Prešov: Mesto Prešov a Fakulta zdravotníctva v Prešove, pp. 17-20.
13. Palovčíková, R. et al. (1992) *Učiteľská psychológia*. Bratislava: SPN.
14. Staňová, P., Chovanová, E. (2014). 'Korekcia porúch správania žiaka mladšieho školského veku pohybovými hrami', *ŠTUDENT NA CESTE K PRAXI III, Zborník príspevkov zo Študentskej vedeckej konferencie v odbore špeciálna pedagogika a liečebná pedagogika*. Prešov: Prešovská univerzita v Prešove, pp. 127-135.
15. Train, A. (2001) *Nejčastější poruchy chování dětí*. Praha: Portál.