

School strain as specific stressor for children with hyperkinetic syndrome

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Abstract The paper focuses on attention deficit hyperactivity disorder within the educational process. On the basis of a non-random sample of integrated seventh to ninth grade pupils with ADHD/ADD (experimental group) and intact pupils of the same age (checking group), preferences of the used coping strategies obtained through a non-standardized questionnaire are analysed. Using the SPAS questionnaire, the level of pupils' self-assessment in both groups is examined. Although the data obtained are not generalised, the lower self-assessment in boys with ADHD can be documented together with the choice of less mature coping strategies in children with ADHD when addressing the problem situation.

Key words ADHD, coping strategy, education, hyperkinetic syndrome, specific behavioural disorders, school strain

1. PUPILS' COPING STRATEGIES USED WHILE DEALING WITH A HEAVY SCHOOL STRAIN

The relationship between school and pupils is considered as a primary factor of effective interaction in school environment and school results. In the case of pupils with specific problems defining e.g. hyperkinetic syndrome, the attitude might escalate during pubescence. Pupils encounter the impression of school performance pressure in connection with the approaching end of basic education and the decision making about following studies. The denial of authorities and contemplation about the sense of a heavy school load disagree with this fact. However, pupils are aware of the importance of good leaving school reports for future desired field of study. School remains an institution which provides teenagers with constant pressure, necessity to solve various educational problems, failure and success etc. These factors distinctively affect pupils with behavioural disorders including pupils with ADHD. It is them who often experience failure, real or subjective, compared to good school results. Many pupils with ADHD are forced to develop much bigger effort just to be able to compare their results to average peers (Michalová, Pešatová 2011). The situations mentioned force them to choose ways to deal with strain, stress, anxiety and strategies to overcome the difficulties. Long-term confrontation with failure, underestimation of their effort, mockery and consequent frustration and stress can result in final resignation. Nevertheless, some pupils opt for an active form of a strategy, usually those with parental and teacher support.

1.1 Aims of the research

J. H. Amirkhan (1990) explored the ways to ease strain and he distinguished three coping strategies. Vágnerová describes them as followed:

1. **Problem-focused coping strategy** leading to an increase of individual activating level and overall readiness to cope with demanding tasks. It is used by older pupils with adequate self-assessment, sufficient self-confidence and skills to evaluate their own possibilities.
2. **Social coping strategy** focused on seeking social support from others and used by either younger pupils or children with low self-esteem. Its advantage is represented by achievement of higher certitude and feeling of safety. Its disadvantage shows in reluctance to become independent and to accept the responsibility for their own work.
3. **Escape-focused strategy.** Escape represents a defensive reaction to a situation perceived as threatening and difficult. The child is unable to cope with it and chooses the strategy to escape. It can also manifest as a disease with psychosomatic character. In that case the deliberate simulation becomes an unconscious body reaction to the represented strain. The defending reactions differ according to their orientation and activity extent of the child's reactions (Vágnerová 2002).

1.2 Analysis of variable hypotheses and establishing of working hypotheses

The aim is to analyse coping strategies of dealing with stress in school environment. Two groups were analysed—teenagers with and without ADHD/ADD. The research aimed at the preferences of individual coping strategies and their gender dependence.

Working hypothesis:

Pupils with ADHD/ADD who are educated in a regular basic school prefer different coping strategies to deal with school strain than intact pupils.

1.3 Research method

To compare the respondents' entry data about their anamnesis and family background, the accessible documentation provided by teachers and educational advisers was used. We also received a permission from participating children's parents. We gathered concrete data from personal files, teachers' records and when

concerning pupils with ADHD also from specialised reports written by neurologists and specialists from pedagogical-psychological service. The purpose of the study was to discover the previously mentioned factors and to compare their connection with the ways that children use to deal with strain situations at school. We also used non-standardized own scale inspired by L. Medved'ová's questionnaire CCSC (coping strategies of 12–14 years old children). Individual items on the scale were constructed to unambiguously match one of the three coping strategies:

1. **Cognitive coping (C)** – it is focused on planning and thinking about the ways of dealing with the problem and about the possible consequences of the chosen strategy. It represents not only thinking about the problem but mainly reflecting on its possible solution. It contains planning, not the actual act.
2. **Distracting activities / emotional coping (D)** – it consists in distractions from thoughts that concern the actual problematic situation using distracting stimuli, entertainment or any other form of distraction that does not require higher physical effort than average.
3. **Avoiding / passive coping (A)** – the effort is put in avoiding the stressful situation. The child keeps distance or leaves the situation (Ayers, et al. 1996).

Four statements for each coping strategy were given as an option. The respondents used number of points to express their answer:

- Never – 1 point
- Sometimes – 2 points
- Often – 3 points
- Always – 4 points

Each statement represented respondent's alternative approaches to dealing with school problems:

When I have a problem at school:

1. I think about it before I start dealing with it. C
2. I try not to think about it and do something nice. D
3. I try to avoid the problem (e.g. not to take the test). A
4. I talk about the problem with my parents, other adults or friends. C
5. I think about the possible easy to avoid school. A
6. I watch television. D
7. I get angry and refuse to deal with it. A
8. I avoid everything that reminds me of the problem because I cannot deal with it. A
9. I try to do something to solve the problem. K
10. I do not worry too much. It is not my fault. D
11. I play computer games in my room. D
12. I think about the lesson the problem can give me. C

In each category corresponding to strategies C, D and A, the respondents were able to obtain 4 to 16 points when the bigger number corresponds with the preference of given strategy. To describe the sample we used the descriptive statistics. In each group, several categories of data were collected: total sum of points expressing their coping strategy preference P_{TS} , average number of points \bar{O}_p , median value of number of points Me_p , minimal and maximal number of points P_{min} and P_{max} a division dispersion of number of points σ_p^2 . During the analysis of obtained data, T-test comparing level of self-assessment in pupils with ADHD/ADD and intact pupils was used. Spearman's rank correlation coefficient was employed to find out the existing connection between school results, school importance for the pupils and their self-assessment and verification of the possible difference in obtained data from pupils with ADHD/ADD and intact pupils. To assess the relation strength of the rank correlation, we used following criteria for coefficient r :

- $r < 0,20$ (insignificant relation),
- $r = 0,20-0,40$ (only a little close relation),
- $r = 0,40-0,70$ (medium close relation),
- $r = 0,70-0,90$ (very close relation),

$r > 0,90$ (extremely close relation).

1.4 Characteristics of the examined sample

The research was implemented in four different basic schools in which pupils with ADHD/ADD are integrated. 230 seventh to ninth graders between 13 and 15 years old participated in the research. Out of the total number of questionnaires, 40 questionnaires of pupils with ADHD/ADD were selected out of which two were removed due to mistakes in their completion. The final group of 38 respondents with ADHD/ADD create the experimental group (EG). The checking sample of intact pupils without ADHD/ADD of the same age was acquired in a random choice of 40 questionnaires from the remaining 190 questionnaires (CG). The gender division of the experimental and checking group is indicated in chart 1.

Chart 1: Gender division of the respondents.

Gender sample division				
	EG – pupils with ADHD/ADD		CG – intact pupils	
	N	[%]	N	[%]
Girls	8	21	13	32,5
Boys	30	79	27	67,5
Total	38	100	40	100

1.5 Coping strategies used by pupils to overcome strain

Testing of the working hypothesis was carried out by data analysis. The data was obtained from non-standardized scale of twelve questions (according to Ayers 1996) from a group of pupils with ADHD/ADD and intact pupils. The results are indicated in chart 2.

Chart 2: Pupils' coping strategies.

Pupils' coping strategies						
	Cognitive coping (C)		Distracting activities, emotional coping (D)		Avoiding, passive coping (A)	
	EG (ADHD/ADD)	CG (intact)	EG (ADHD/ADD)	CG (intact)	EG (ADHD/ADD)	CG (intact)
P	229	279	321	259	197	233
P	4	4	4	4	4	4
P	12	12	12	12	12	10
\bar{O}	6,03	6,98	8,45	6,48	6,87	5,83
M	6	7	8	6,5	7	5
Σ	6,82	7,57	3,98	6,45	6,32	5,69

The analysis of data demonstrated in chart 2 manifested lower use of cognitive strategies in experimental group (pupils with ADHD/ADD) while overcoming strain ($Me_p = 6$). These pupils do not spend too much time thinking about the ways of solving problems. On the other hand, the intact group prefer cognitive strategies ($Me_p = 7$). Experimental group of pupils with

ADHD/ADD prefer distracting activities in combination with emotional coping ($Me_p = 8$, dispersion is relatively low $\sigma_p^2 = 3,98$). They try to escape from the problematic situation by distraction and entertainment. They do not think about the problem and they try to avoid dealing with it ($Me_p = 7$). A relatively high dispersion ($\sigma_p^2 = 6,32$) gives evidence of other coping strategies used by pupils with ADHD/ADD. The checking group try to distract themselves with a different activity too. They seek for emotional support from other people when confronted with a problem. However, compared to the experimental group, they do not avoid dealing with the problem ($Me_p = 5$).

1.6 Coping strategies in boys

Coping strategies differ according to the gender. When we compare boys' preferences in both groups (chart 3), we can notice that boys with ADHD/ADD distinctively prefer emotional coping strategies and distracting activities ($Me_p = 8,5$), and use the cognitive strategies the least ($Me_p = 5$). Boys from the checking group prefer cognitive decision making ($Me_p = 6$) and avoid passive dealing with the problem ($Me_p = 5$). At the same time, the cognitive strategies of dealing with problems and strategies of distracting activities and emotional support are approximately the same for boys from the checking group ($Me_p = 6$).

Chart 3: Coping strategies in boys.

Coping strategies in boys						
	Cognitive decision making (C)		Distracting activities, emotional coping (D)		Avoiding, passive coping (A)	
	EG (ADHD / ADD)	CG (intact)	EG (ADHD / ADD)	CG (intact)	EG (ADHD/ADD)	CG (intact)
P_{TS}	168	188	263	167	197	189
P_{min}	3	3	4	3	3	3
P_{max}	11	12	12	11	12	10
σ_p	5,6	6,38	8,6	6,19	6,57	5,89
Me_p	5	6	8,5	6	6,5	5
Σp^2	6,11	7,26	3,97	5,34	5,78	5,65

1.7 Coping strategies in girls

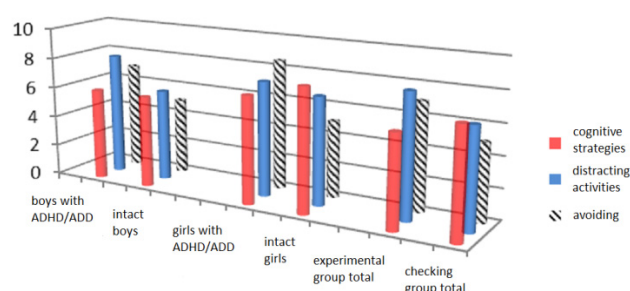
Girls with ADHD/ADD (experimental group, chart 4) prefer coping strategy of avoiding the problem—e.g. escape in the form of health problems, excuse from the examination etc. ($Me_p = 8,5$) to cognitive strategy of dealing with the problem which is the least used ($Me_p = 7$). Both girl groups use the strategy of postponing the problem by escape in the form of distracting activities, entertainment or discussion with adults or their peers. ($Me_p = 7,5$ EG; $Me_p = 7$ CG). Intact girls (CG) definitely prefer cognitive strategies of dealing with problems ($Me_p = 8$), even more than intact boys from the same group ($Me_p = 6$).

Chart 4: Coping strategies in girls.

Coping strategies in girls						
	Cognitive decision making (C)		Distracting activities, emotional coping (D)		Avoiding, passive coping (A)	
	EG (ADHD/ ADD)	CG (intact)	EG (ADHD/ ADD)	CG (intact)	EG (ADHD/ ADD)	CG (intact)
P_{TS}	61	95	58	92	64	74
P_{min}	4	3	5	3	4	3
P_{max}	12	12	11	12	12	10
σ_p	7,63	7,31	7,88	7,08	8	5,69
Me_p	7	8	7,5	7	8,5	5
Σp^2	6,23	8,06	3,61	8,22	6,75	5,75

1.8 Comparison of coping strategies in pupils with ADHS/ADD a intact pupils

The total overview of coping strategies of experimental group of boys and girls with ADHD/ADD and boys and girls from the intact group is indicated in graph 1.



Graph 1: Preferential overview of coping strategies in pupils with ADHD/ADD and intact pupils (expressed by median Me_p).

Graph 1 shows that intact girls without ADHD/ADD (checking group) choose cognitive strategies of dealing with problems the most from all responding groups. Girls with ADHD/ADD (experimental group) prefer the strategy to avoid problems. Boys from both groups use cognitive strategies – boys from checking group use all three types of strategies similarly but boys with ADHD/ADD use the cognitive strategy the least. They prefer distraction with a different activity and they seek for emotional support from adults or peers, then they try to avoid the problem and not to deal with it.

To sum up, we can observe that intact girls from the checking group, compared to the other respondents, are the most responsible in dealing with problems.

The differences in coping strategy preferences in pupils with ADHS/ADD and intact pupils were evaluated by T-test (chart 5). We observe statistically important difference in use of coping strategies in two of three monitored areas: search for distracting activities and emotional support ($t = 1,87$ in 5% of significance level) a and also avoiding the problem ($t = 2,31$ in 1% of significance level).

Chart 5: Differences in coping strategies of EG a CG.

t-values * 5% of sign. level **1% of sign. level	Cognitive strategies	Distracting activities and emotional support	Avoiding, passive coping
Cognitive strategies	0,14		
Distracting activities and emotional support		1,87*	
Avoiding, passive coping			2,31**

* 5% sign. level, ** 1% sign. Level

The category of cognitive strategy does not show statistically important difference in preferences. The difference in preferences of emotional coping (D) and passive coping (A) was proved on minimally 5% of significance level and confirms the working hypothesis. Pupils with ADHD/ADD educated in regular basic schools prefer different coping strategies to deal with problems than intact pupils.

While generalising the research findings the limited size of examined sample (78 pupils) has to be considered.

Conclusion

According to the acquired data, boys with ADHD/ADD consider themselves less successful in schools and pupils with ADHD/ADD integrated into basic school system prefer to use less acceptable coping strategies to deal with problems than their intact peers. The

results positively collate with the study about children with specific learning disorders and their skills of dealing with social situations. When forced to solve social and relational problems pupils with specific learning disorders were not able to find more possible (Toro, Weissberg, Guare, Libenstein 1990). L. L. Weyandt highlights the fact that inefficient students prefer maladaptive coping strategies represented by passivity and rigidity (Weyandt 2009).

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