

Mental Vulnerability and Coping Strategies as a Factor for Academic Success for Pupils with Special Education Needs

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Abstract—Slovak, as well as foreign authors, believe that the influence of non-cognitive factors on a student's academic success or failure is unquestionable. The aim of this paper is to establish a link between the mental vulnerability and coping strategies used by 4th grade elementary school students in dealing with stressful situations and their academic performance, which was used as a simple quantitative indicator of academic success. The research sample consists of 320 students representing the standard population and 60 students with special education needs (SEN), who were assessed by the Strengths and Difficulties Questionnaire (SDQ) by their teachers and the Children's Coping Strategies Checklist (CCSC-R1) filled in by themselves. Students with SEN recorded an extraordinarily high frequency of mental vulnerability (34.5 %) than students representing the standard population (7 %). The poorest academic performance of students with SEN was associated with the avoidance behavior displayed during stressful situations. Students of the standard population did not demonstrate this association. Students with SEN are more likely to display mental health problems than students of the standard population. This may be caused by the accumulation of and frequent exposure to situations that they perceive as stressful.

Keywords—Coping, mental vulnerability, students with special education needs, academic performance, academic success.

I. INTRODUCTION

THE survey of school success is one of the objectives of school psychology that is closely connected to the practice of educators and special needs educators. Researchers have been theorizing its definition and examining its factors since the 1970s.

Unlike school failure, which can be clearly defined, school success is perceived as a range, which makes its examination troublesome mainly because of the unclear specification of individual grades within this range. This research uncertainty is only deepened by individualized views of school success as such stemming from personal experience, the researcher's opinions and attitudes, and the diversity of what is considered to be the so-called "poor" school success and what characterizes "great" school success.

Success reflects an individual's relationship to an activity depending on how good the individual is at the activity [1]. The author defined it as a school performance or student's behavior, and it corresponds to the requirements of the school and teaching roles defined by the school assessment policy for the relevant grade. Since fulfillment of this definition may

vary with each student, it is useful to divide school success into the following categories:

- *absolute school success* when the student has good grades, is assessed as successful from the perspective of an objective observer – teacher and, at the same time, the student views himself/herself as successful as well.
- *relative school success* when the student is perceived as a good student even though he/she does not attain the performance which would correspond to his/her potential because of the existence of factors preventing the student reaching his/her potential to the full extent. This can happen particularly because of an adverse family environment, the student's illness, or because of special educational needs.
- *partial school success* when the student performs well in a certain area, but lags behind or performs below standard in other subjects.
- *episodic school success* (cf. [1]) when the student's performance depends on external factors, such as a particular teacher or a unique relationship established with the teacher, an actual situation in the student's family, etc. These factors can have a stimulating or, on the contrary, inhibitory effect on a student's activity at school.

The non-cognitive factors which influence school success in the research presented includes coping strategies employed by students in the solution of stressful situations. Some authors assert that coping strategies are related to the organization of an activity, perception of control over a situation, perception of one's own competence and, furthermore, they also determine the autonomy of an individual [2]. We presuppose that they also have an indirect influence on a student's behavior at school and on a student's school performance. Mental vulnerability is the predictor of mental health or mental illness [3]. This concept appeared in the 1960s to predict the mental health of soldiers and is closely connected with coping strategies. As these authors note, current research works show that persons with high scores in the mental vulnerability questionnaires have, among other things, pains more frequently and it is more difficult for them to deal with stressful situations. Persons with higher scores in mental vulnerability should not be perceived as mentally ill persons, but rather as individuals threatened by illness, whether mental or physical. Mental vulnerability appears as early as in the behavior of pre-school age students through a wide range of activities, e.g. disobedience, fights with other children, anxiety, shyness, eating disorders, tearfulness and fits of

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anger, as well as less frequent behavior, such as stealing or self-harming [4].

The connection of coping strategies and mental vulnerability with school success has not been examined, be it in Slovak or international literature. Therefore, this paper aims to clarify the connections between these non-cognitive characteristics of students and school success of elementary school students, comparing the group of students representing the standard population and the group of students with special education needs (SEN) in the specified variables. The groups were not expected to show statistically significant differences, since the scores in mental vulnerability and in individual coping strategies were expected to have the same effect on the school results of each of the groups, and these results were taken as a quantitative representative of school success.

II. METHODS

A. Strengths and Difficulties Questionnaire (SDQ-Svk)

The Strengths and Difficulties Questionnaire was developed by the working group of Goodman, Melzer and Baily at the University of London in the 1990s and serves as a screening tool for the quick assessment of behavior for children aged three years to 16 years [5]. It exists in three versions: teacher version, child version, and parent version. This research employed the teacher version assessing a student's behavior employing a three-grade scale (not true – somewhat true – certainly true). The questionnaire consists of 25 questions to assess the frequency of a particular behavior. The questions are sorted into five subscales: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, and prosocial behavior. Summing up the first four subscales produces the total scores which express the total difficulty rate of the student. In our research, the Cronbach's alpha values reached were sufficient to allow us to state that it can be used for the purposes of our research. Individual subscales scored in reliability as follows: emotional symptoms (CA = 0.707), conduct problems (CA = 0.657), hyperactivity/inattention (CA = 0.835), peer relationship problems (CA = 0.702), prosocial behavior (CA = 0.834).

B. Children's Coping Strategies Checklist Revision 1

The Children's Coping Strategies Checklist (CCSC-R1) is based on a four-factor model of coping strategies which divides basic behaviors in stressful situations into active coping, distraction strategy, avoidance strategy, and support seeking coping strategies [6], [7]. This questionnaire has not been translated into the Slovak language yet. In order to keep the meaning of the questions, the reverse translation method was used. This means that the questionnaire was translated from English to Slovak by one translator and then translated back to English by another translator. Both English versions – the genuine and the new one – were compared and different sounding questions were then adjusted in the discussion. Fifty-four items are filled out by a student who assesses his/her typical behavior when experiencing a problem using a four grade scale (Never – Sometimes – Often – Mostly). Ten

subscales, which provide more detailed information about a student's typical method of coping with a stressful situation, are subsumed under four key strategies:

Active coping involves contemplation, planning and using efforts to handle the troublesome situation the best way possible.

Distraction strategies are typical for a youth going rather for the activities not connected with problem solving, but reducing stress ensuing from the problem, e.g. physical activity, substitute activities such as tidying up or doing other tasks, etc.

Avoidance strategies is behavior when the child does not want to think of the stress situation, avoids discussions on the topic and tries not to deal with it in his/her thoughts as well. It can be perceived by others as ignorance or daydreaming.

Support seeking coping strategies is a strategy when a child actively seeks the advice, information or direct assistance from someone else, shares his/her feelings and looks for understanding which helps the child to cope with the stressful situation [6].

Cronbach's alpha of subscales displays an excellent internal consistency of items, which also evidences a good translation. The values reached were as follows: active coping 0.887; distraction strategy 0.856; avoidance strategy 0.732; and support seeking strategy 0.799.

C. School Success

School success was assessed by school performance. School performance in Slovakia is expressed by numbers: 1 = excellent, 2 = very good, 3 = good, 4 = sufficient, 5 = insufficient. Thus, those pupils scoring the lowest marks attain better school success.

III. RESULTS

The research samples comprised a) a group of students representing the standard population (173 boys, 147 girls); and b) a group of students with SEN (36 boys, 24 girls). Students with learning disorders (26 students) and students with communication disorders (15 students) formed the largest groups within the research sample of students with SEN. Further groups were represented as follows: intellectually gifted students (seven students); students with mild intellectual disability (six students); students with ADHD (three students); students with autism spectrum disorder (two students); and one student with sensory processing disorder.

Students from disadvantaged backgrounds were not included in the research sample, because this group of students involves specific types of issues. Their school performance and activity at school is substantially conditioned by the socio-cultural environment and deserves a separate analysis.

Students with SEN scored on average higher than students from the standard population in each of the areas indicating possible troubles in the area of mental health. The borderline values and values indicating behavior which can already be defined as pathological – abnormal were achieved more often by students with SEN (Table I). The most significant difference was found in the area of hyperactivity, where the

abnormal levels were reached by only 7.3% of students of the standard population, as opposed to the one third reached among students with SEN.

TABLE I

SEVERITY OF ISSUES OCCURRED IN THE AREA OF MENTAL HEALTH – MENTAL VULNERABILITY (MEASURED BY THE SDQ-SVK QUESTIONNAIRE) OF STUDENTS OF THE STANDARD POPULATION AND THE STUDENTS WITH SPECIAL EDUCATION NEEDS

	Emotional symptoms (%)		Conduct problems (%)		Hyperactivity (%)	
	SP	SEN	SP	SEN	SP	SEN
Normal	91.2	67.8	87.5	65.5	88.6	54.2
Borderline	5.3	13.6	6.9	17.2	4.1	11.9
Abnormal	3.4	18.6	5.6	17.2	7.3	33.9
	Peer problems (%)		Prosocial behavior (%)		Total difficulties score (%)	
	SP	SEN	SP	SEN	SP	SEN
Normal	83.8	61.0	87.5	74.6	84.8	34.5
Borderline	8.8	18.6	8.1	10.2	8.3	31.0
Abnormal	6.6	20.3	4.4	15.3	7.0	34.5

The occurrence of conduct problems in students with SEN is significantly connected with avoidance strategies. This strategy is also directly proportional to the hyperactivity signs reaching the significance level $p \leq 0.05$ in each of the groups of students.

TABLE II

CORRELATIONS BETWEEN COPING STRATEGIES AND MENTAL VULNERABILITY SYMPTOMS IN PUPILS WITH SPECIAL EDUCATION NEEDS

	Active coping	Avoiding coping	Distraction	Seeking support
Emotional symptoms	-.018	-.275	-.022	.045
Conduct problems	.179	.385**	.136	.079
Hyperactivity	.174	.319*	.001	.069
Peer problems	.215	.096	.246	.069
Prosocial behavior	-.138	-.226	-.135	-.054
Total difficulties score	.181	.234	.113	.122

* $p \leq 0.05$, ** $p \leq 0.01$

Distraction strategies in stress situations employed by students of the standard population show significant association with conduct problems and hyperactivity signs (Table III). However, students with a strong tendency towards prosocial behavior employ distraction strategies in stress situations with much less frequently than the students scoring low in this area.

Table IV shows the only significant association between school success and total difficulties score in students with special education needs. This association was not confirmed for students of the standard population.

IV. DISCUSSION

The aim of this paper was to clarify the relationship between school results which represent school success in the analyses and mental vulnerability and coping strategies employed in stressful situations. Both groups of students, i.e. students of the standard population and students with SEN were also compared through the average scores reached in the mental vulnerability subscales, this was done to avoid

mistakes in interpretation stemming from the primary differences between the research samples.

TABLE III
CORRELATIONS BETWEEN COPING STRATEGIES AND MENTAL VULNERABILITY SYMPTOMS IN STUDENTS OF STANDARD POPULATION

	Active coping	Avoiding coping	Distraction	Seeking support
Emotional symptoms	.043	.012	-.022	-.051
Conduct problems	.028	.089	.215**	.057
Hyperactivity	.047	.150*	.179*	.069
Peer problems	-.101	-.058	-.031	-.037
Prosocial behavior	-.011	-.063	-.186**	-.057
Total difficulties score	-.008	.068	.093	-.004

* $p \leq 0.05$, ** $p \leq 0.01$

TABLE IV

CORRELATIONS BETWEEN COPING STRATEGIES, MENTAL VULNERABILITY SYMPTOMS AND SCHOOL SUCCESS IN STUDENTS OF STANDARD POPULATION AND STUDENTS WITH SPECIAL EDUCATION NEEDS

	School achievement	
	SP	SEN
Emotional symptoms	.047	.089
Conduct problems	-.040	.127
Hyperactivity	.068	.244
Peer problems	-.025	.098
Prosocial behavior	.065	-.163
Total difficulties score	.036	.266*
Active coping	.001	-.048
Avoiding coping	-.003	.250
Distraction	.065	.122
Seeking support	-.040	.007

* $p \leq 0.05$, ** $p \leq 0.01$

The most significant difference in mental vulnerability was found in the area of hyperactivity. This is understandable, since students with SEN are often diagnosed with a disorder involving hyperactivity and inattention. The risk areas showing more significant difference between the groups include the emotional symptoms, conduct problems and peer problems. Students with SEN show much higher values in these areas than the students of the standard population. The causality of the mental vulnerability – school problems relationship could not be evidenced from the research presented. It is probable that this phenomenon is a multiple causality issue deserving deeper research. Peer problems may also be related to the problems in the emotional area. However, our results show that mental vulnerability is a factor which is connected with the coping strategy employed in a stressful situation, but the direct relation to the school performance was only confirmed for the students with SEN. Neither of the subscales correlated with the students' grades. This is considered to be a significant finding, indicating that problems in the area of mental health do not have to necessarily mean school failure. It is evident that such a student is able to profit from, as well as achieve school success to the extent that can be expected from him/her, despite the less favorable conditions stemming from his/her disability.

The relationship between the school results (grades) and the coping strategy was not proven for the students of the standard population. Nevertheless, the indirect relationship between these strategies and the school success materialized through another important factor cannot be dismissed. Muller and Spitz noted that functional coping strategies, such as active coping, are closely connected with positive self-esteem and better dealing with mental distress, while such strategies as avoidance strategy go hand in hand with low self-esteem and worse, stress perception [8]. Children tend to use escapist or avoidance strategies particularly when the situation at hand goes beyond the capacities the child has to resolve it, or is even unsolvable for the child. Under common conditions, this strategy is of a defensive nature protecting the child from overloading and investing energy into battles which have already been lost [9]. However, if the child starts using it in any stress situation, it changes to a non-functional coping strategy because it is opted for even if the obstacle can be handled using more effort, but the child does not even give it a try.

We suppose that education of a student with SEN in integrated conditions increases the stress felt by the child, but nor is it always perceived by the student as positive, since students may also react to the otherness of their classmates through their exclusion from social contact. Students with intellectual disability educated at elementary schools have significantly fewer communication interactions than students with the same disability educated at special education schools [10]. This could also be resolved through so-called social rehabilitation which helps individuals adapt to life in society, training them in appropriate communication with other people and acquisition of work habits [11].

The use of efficient coping strategies leads to a change of a student's behavior, emotional experience, and improvement of cognitive reactions in stressful situations [2]. But this requires targeted support meaning complex individualized work with subtests where interventions undertaken are based on the awareness of the specific needs of each individual student.

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