

Academic coping among elementary school students

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Abstract

School plays an important role in the lives of children and adolescents. The continuous fulfillment of school tasks could be major stressors for students. The way how children and adolescents deal with academic demands influences their academic success. Despite this fact we have not got enough knowledge of students' coping with academic stress in Hungary. The goal of our pilot study is to investigate academic coping among 4th, 6th and 8th grade students (N=122). We used an adapted self-report instrument. According to the results students use adaptive strategies rather than maladaptive strategies. However, use of adaptive strategies decreases by age. In gender comparison girls are more likely to use adaptive strategies, but the difference was not significant. The use of maladaptive coping shows a negative, significant correlation with marks. There is no significant correlation between the marks and the adaptive way of coping. Examining the role of academic coping in students' school achievement we can identify that it plays an important role in school success.

Keywords: stress, academic coping, students

I. Introduction

In the studies of the effectiveness of learning in addition to the cognitive factors which influence performance, an increasing emphasis is placed on exploring the affective background. The results indicate that several factors together affect learning efficiency. As students are faced with many stress situations during school attendance, coping strategies are important factors in effective learning. According to international findings academic coping show correlation with the student's general wellbeing, academic achievement, learning motivation and learning goals (*Chai & Low, 2015; Brdar, Rijavec & Loncaric, 2006; Saadu & Adedayo, 2013, Vierhaus, Lohaus & Wild, 2016*). Nevertheless, we have little knowledge of the coping processes faced by school stressors among Hungarian students.

The goal of our pilot study is to investigate academic coping among 4th, 6th and 8th grade elementary school students. We have adapted an academic coping questionnaire by *Skinner, Pitzer & Steele (2013)*. In this paper, we show results of the investigation of academic coping in grade comparison, and the connection of academic coping with background datas.

II. Topic discussion

II.1. Interpretation of stress and coping

According to *Selye (1976)* stress is a non-specific response of the individual's body that occurs in any increased use. Stress has a generally stimulating effect on individuals, but the beneficial eustress and distressing distress - which were differentiated in his stress theory - have different characteristics. The former means challenge and urge, while the latter is destructive and often uncontrollable. Stress triggers are called stressors. Stressors can be defined as environmental factors or states that endanger the emotional and physical health and well-being of an individual in a concrete age and society (*Zimmer-Gembeck, Skinner, Morris & Thomas, 2012*). A stimulus becomes stressful if it cannot be controlled by an individual and the stress cannot be controlled by activity (*Dávid, 2014; Kopp, 2003*). So, during stress we feel that the handling of circumstances exceeds our current capabilities (*Carver, 2011*). Stress-causing events trigger an emotional reaction that predicts the experience of a threat. According to *Zimmer-Gembeck, Skinner, Morris & Thomas (2012)* emotional stress reactions play a very important role in stress assessment. Emotions make it possible to quickly assess the situation and prepare for an individual response. Emotional intensity indicates that the management of stressful situation or frustrated inner status needs coping response.

Individual reactions to stressful situations show a varied picture. Coping strategies show how the person can cope with difficult, frustrating situations and stress (*Margitics & Pauwlik, 2006*). Coping is a cognitive or behavioural effort by which an individual expects external or internal influences that exceed his current personal resources (*Oláh, 2005*). According to the transactional approach the individual is in constant, two-way interaction with his environment, so coping is the result of the dynamic interaction between personal attributes and environmental factors (*Rózsa, Purebl, Susánszky, Kő, Szadóczky, Réthelyi, Danis, Skrabski & Kopp, 2008*). The central element of this process is evaluation which plays an important role in the way how individual struggles with stressors (*Aldwin, 2011*). During the evaluation process a stress-trigger event is first surveyed and after the assessment of the required resources the strategies are activated, and at the end of the process individual assesses the effectiveness of coping (*Hamvai & Pikó, 2008*). The coping strategies can be separated by the adaptivity-maladaptivity dimensions (*Kopp, 2003*). Adaptive coping means successfully stress-management, while maladaptive coping involves the use of strategies that fail to address the problem. According to *Zimmer-Gembeck & Skinner (2015)* the complexity of the coping process stems from the diversity of emotional reactions and the variety of stress assessment which is influenced by our past experiences. In addition to these two factors, it is important to note that the process itself is stress-related, so each stressor can activate different coping strategies.

II.2. Academic coping

School plays an important role in the lives of children and adolescents. Continuous fulfilment in school can be major stress in the lives of students, which can be further strengthened by the fact that teachers and parents often formulate their judgments based on the school performance of children (*Takács, Kóbor & Csépe, 2010*). Because the individual assessment can be different for different stressors, students can use different coping strategies in social and school contexts. Academic coping involves responses to stressors associated with learning and teaching processes. Among the most common stress factors in the school are the understanding of the curriculum, the amount of homework, self-preparation, failure experience, comparison with peers, assessment and evaluation (*Singer, 2008, Skinner, Pitzer & Steele, 2013, Yusoff, 2015*). There are several approaches and divisions to categorize coping strategies in the academic domain. It is typical that relevant studies sometimes call differently the strategies used by students and examine them in relation to different variables. In some studies investigation of academic coping was a part of a complex model related to motivation (e.g. *Marchand & Skinner, 2007; Skinner, Pitzer & Brule, 2014; Skinner, Pitzer & Steele, 2013*). In other studies

the purpose was to examine the relationship between academic coping and school success (*Saadu & Adedayo, 2013*), emotions and emotion regulation (*Vierhaus, Lohaus & Wild, 2016*) or coping strategies in social situations (*Ben-Eliyahu & Kaplan, 2015*). Despite the different design concepts and the different denominations of coping strategies, most researchers agree that they are approaching the problem with the adaptive-maladaptive dimension.

Skinner, Pitzer & Steele (2013) studied students' academic coping strategies through a motivational resilience model based on self-determination theory. The model assumes that basic psychology needs such as competence, autonomy and relatedness play a role in the motivation process. The level of satisfaction of these three psychological needs affects students' engagement or disaffection against school tasks. In this context, engaged students use adaptive coping strategies against school stressors, while disaffection leads to maladaptive coping. Coping strategies have an impact on students' motivation and they are closely related to giving-up or retrying. As learning motivation decreases by age, the use of adaptive coping strategies as well. (*Józsa & D. Molnár, 2013; Józsa & Morgan, 2014; Józsa & Morgan, 2015; Józsa, Wang, Barrett & Morgan, 2014; Zimmer-Gembeck & Skinner, 2011*).

Skinner, Pitzer & Steele (2013) separated five adaptive and six maladaptive coping strategies in the academic domain, which can be seen in the *1. table*. In strategizing students focus on the problem, and they try to find out the solution. Help-seeking refers to the involvement of an external person to solve problems. In comfort-seeking the goal is also to involve an external person, but unlike the help-seeking strategy, it is not because of the problem solving, it is about the emotional support for stress management. Self-encouragement refers to students' attempts to regulate their own flagging emotions by bolstering confidence and optimism. In commitment children try to remind themselves why the challenging academic work is personally important to them.

Among the maladaptive coping strategies confusion is a stress reaction when students' mind goes blind and they do not really know what should they do to solve the problem. Escape refers to cognitive avoidance when students ignore the significance of the situation and reduce the seriousness of the task. Concealment refers to preventing others from finding out problem, difficulty and negative event. In self-pity students feel sorry for themselves and their problems. Rumination means preoccupation with the negative or anxious features of a stressful situation. Projection refers to blaming other people for negative outcomes.

Table 1. Categorization of academic coping strategies

Adaptive coping strategies	Maladaptive coping strategies
strategizing	confusion
help-seeking	escape
comfort-seeking	concealment
commitment	self-pity
self-encouragement	ruminantion
	projection

III. Results

III.1. Methods

III.1.1. Goals of the study

The goal of our pilot study is to investigate academic coping among elementary school students. We compare coping strategies between grades and gender. We want to investigate coping strategies' effect on school achievement.

III.1.2. Sample and survey

In our study, there were 122 elementary school students from Szeged, 35 fourth graders, 45 sixth graders and 42 eighth graders. The sample includes 57 boys and 65 girls. The survey took place in February 2017 with the permission of school principals and compliance with data protection regulations. The questionnaires were filled out by the children independently with the supervision of teachers.

III.1.3. Instrument

We have adapted a self-repot instrument by *Skinner, Pitzer & Steele (2013)* which has got 55 four-point Likert-scale items. Five adaptive (strategizing, help-seeking, comfort-seeking, self-encouragement, commitment) and six maladaptive (confusion, escape, concealment, self-pity, ruminantion, projection) ways of coping are included. Each of the 11 coping subscales consisted of five items. In *table 2.* the reliability of the subscales is summarized. As it can be seen all of the subscales and the two main scales were reliable in the sample of sixth and eighth graders, but we have got low cronbach- α values on the subscales of confusion, escape and self-pity in the sample of fourth graders.

We have checked the structure of the questionnaire with factor analysis (KMO=0,75). Firstly, we have got 12 factors, in this case the explained variance was 69 percent. With 11 factors the explained variance is 67 percent. In total, the items matched well. Similarly worded items were included in several factors. Items of self-encouragement related to other scales (strategizing, escape, commitment), and items of escape appeared in two factors.

Table 2. Reliability of the questionnaire (cronbach- α)

Scale	4.	6.	8.	Whole sample
Strategizing	0,73	0,87	0,83	0,87
Help-seeking	0,72	0,76	0,75	0,75
Comfort-seeking	0,92	0,86	0,86	0,88
Self-encouragement	0,63	0,68	0,74	0,68
Commitment	0,74	0,88	0,81	0,86
All adaptive	0,86	0,92	0,91	0,91
Confusion	0,36	0,75	0,85	0,72
Escape	0,52	0,84	0,76	0,77
Concealment	0,80	0,88	0,94	0,88
Self-pity	0,57	0,87	0,92	0,83
Rumination	0,72	0,85	0,84	0,84
Projection	0,60	0,84	0,91	0,88
All maladaptive	0,78	0,87	0,93	0,87

III.2. Empirical results of the study

III.2.1. Comparison of the use of coping strategies

We compared the coping strategies between grades, which can be seen in *table 3*. According to the results the most common way of coping is strategizing. Students rather use adaptive coping strategies than maladaptive. We found some significant difference between the use of strategizing, commitment and projection. In these cases, every grade differed from each other. The use of strategizing and commitment decreases by age, while projection increases. Fourth graders rather use self-encouragement than the sixth and eighth graders. In the use of escape there was significant difference only between the sixth and eighth graders. The eighth graders use rumination significantly less often than the fourth and sixth graders. According to the results

adaptive coping decreases by age, fourth graders rather use adaptive strategies than the others. In the use of maladaptive coping strategies there was no significant difference between grades. We compared coping strategies between gender as well. As a result, we found significant difference in the use of comfort-seeking ($t=3,68$; $p<0,001$). Girls are more likely to use this way of coping than boys, while self-pity is more typical for boys ($t=2,12$; $p=0,03$). In gender comparison girls are more likely to use adaptive strategies, but the difference was not significant.

Table 3. Means and standard deviations of strategies and the F and p values of the variance analysis

Coping strategy	Grades Mean (SD)			Variance analysis
	4.	6.	8.	F (p)
Strategizing	3,52 (0,46) *	3,10 (0,69) *	2,70 (0,68) *	15,93 (<0,001)
Help-seeking	3,14 (0,68)	2,99 (0,54)	2,84 (0,68)	1,04 (0,35)
Comfort-seeking	3,16 (0,91)	2,94 (0,82)	2,72 (0,89)	2,39 (0,09)
Self-encouragement	3,04 (0,60) *	2,69 (0,62)	2,65 (0,65)	10,35 (<0,001)
Commitment	3,50 (0,52) *	3,04 (0,75) *	2,70 (0,74) *	12,93 (<0,001)
All adaptive	3,25 (0,43) *	2,95 (0,53)	2,72 (0,53)	10,35 ($p<0,001$)
Confusion	2,04 (0,50)	2,08 (0,67)	2,10 (0,76)	0,09 (0,91)
Escape	2,26 (0,60)	1,93 (0,76) *	2,56 (0,67) *	8,61 (<0,001)
Concealment	1,53 (0,71)	1,74 (0,71)	1,58 (0,83)	0,67 (0,50)
Self-pity	1,89 (0,61)	1,86 (0,74)	1,76 (0,86)	0,34 (0,70)
Rumination	2,44 (0,67)	2,28 (0,78)	1,78 (0,68) *	9,12 (<0,001)
Projection	1,44 (0,47) *	1,85 (0,69) *	2,39 (0,93) *	15,82 (<0,001)
All maladaptive	1,97 (0,35)	1,92 (0,42)	2,04 (0,54)	0,73 (0,48)

* the difference is significant

III.2.2. Correlations between the coping strategies and background datas

We examined the correlations between coping strategies and the level of parents' education, attitudes towards school and marks of Math, Grammar, Literature and Foreign Language. Only self-pity showed low negative, but significant correlation with the level of fathers' ($r=-0,22$; $p=0,01$) and mothers' education ($r=-0,18$; $p=0,04$). So, if the education level of the parents is higher, self-pity is less typical for the students. Attitudes toward school is in significant

connection with strategizing ($r=0,20$; $p=0,02$), help-seeking ($r=0,32$; $p<0,001$), and commitment ($r=0,24$; $p=0,009$). Those students who more prefer school are more likely to use these adaptive coping strategies. The mean of all adaptive coping strategies also correlated with attitudes toward school ($r=0,26$; $p=0,004$). Maladaptive coping strategies as projection ($r=-0,41$; $p<0,001$) and confusion ($r=-0,21$; $p=0,02$) correlated negatively with the attitudes toward school, as well as the mean of all maladaptive coping strategies ($r=-0,23$; $p=0,01$).

From the adaptive coping strategies only strategizing showed significant correlation with the mark of Mathematics ($r=0,27$; $p=0,002$). There can be more correlations detect between the maladaptive strategies and marks. Mark of Math correlates negatively with concealment ($r=-0,26$; $p=0,004$), projection ($r=-0,28$; $p=0,002$), confusion ($r=-0,30$; $p=0,001$) and self-pity ($r=-0,38$; $p<0,001$). Mark of Grammar correlated negatively with concealment ($r=-0,24$; $p=0,007$), confusion ($r=-0,21$; $p=0,02$) and self-pity ($r=-0,38$; $p<0,001$). Mark of Literature showed negative correlation with concealment ($r=-0,24$; $p=0,007$), confusion ($r=-0,27$; $p=0,003$), escape ($r=-0,24$; $p=0,009$) and self-pity ($r=-0,40$; $p<0,001$). Mark from Foreign language correlates negatively only with self-pity ($r=-0,24$; $p=0,008$).

III.3.3. Adaptive and maladaptive coping's effect on marks

We examined the effect of adaptive and maladaptive coping strategies on marks by regression analysis (*table 4.*). According to the results only maladaptive coping has got significant effect on marks. Maladaptive coping explains marks of Math in 14,51 percent, while adaptive coping in only 3,38 percent. The explained variance of maladaptive coping in marks is 15,21 percent in Literature, 10,49 percent in Grammar and 6,5 percent in Foreign Language. Adaptive coping has not got significant effect on these marks. So, these results mean that maladaptive coping strategies have got significant negative impact on students' achievement.

Table 4. Results of the regression analysis

Dependent variables	Independent variables			
	Adaptive coping		Maladaptive coping	
	r·β·100	p	r·β·100	p
Math	3,38	0,04	14,51	<0,001
Grammar	1,66	0,15	10,49	<0,001
Literature	0,68	0,36	15,21	<0,001
Foreign Language	1,18	0,23	6,55	0,004

IV. Conclusions

School and learning play important roles in the lives of students. Academic coping involves responses to stressors associated with learning and teaching processes. The way how children and adolescents deal with academic demands influences their academic success. In our pilot study, we investigated academic coping among elementary school students. Our goals were to compare coping strategies between grades and gender, and examine coping strategies' effect on school achievement. We used the Hungarian version of Academic Coping Scale, which is a self-report instrument. According to the results students use adaptive strategies rather than maladaptive strategies. However, use of adaptive strategies decreases by age. In gender comparison girls are more likely to use adaptive strategies, but the difference was not significant. Education level of parents does not correlate with student' coping strategies. Children who have got better attitude toward school rather use adaptive coping strategies, while student who doesn't really like school rather use maladaptive coping strategies. Adaptive coping has not got significant effect on marks, but maladaptive coping strategies have got significant negative impact on students' achievement. Examining the role of academic coping in students' school achievement we can identify that it plays an important role in school success. Maladaptive coping contributes to bad performance in each subject. So, it seems to be important to measure academic coping in a larger sample and explore the factors which influence students' academic coping.

References

- Aldwin, C. M.: *Stress and Coping across the Lifespan*. In: Folkman, S. (eds.): *The Oxford Handbook of Stress, Health, and Coping*. Oxford University Press. Oxford, 2011. pp. 15–35.
- Ben-Eliyahu, A. – Kaplan A.: Growth curve modeling analysis of social and academic coping during elementary school. *Journal of Applied Developmental Psychology*. 2015. Vol 41. no. 6. pp. 99–109.
- Carver, C. S.: *Coping*. In: Contandra, R. J. – Baum, A. (eds.): *The Handbook of Stress Science*. Springer Publishing Company. New York, 2011. pp. 221–230.
- Chai, M. S. – Low, C. S.: Personality, Coping and Stress Among University Students. *American Journal of Applied Psychology*. 2015. Vol. 4. no. 1–3. pp. 33–38.

- Dávid, I.: *A stressz és kezelése*. In: Dávid, I. – Fülöp, M. – Pataky, N. – Rudas, J. (eds): *Stressz, megküzdés, versengés, konfliktusok*. Magyar Tehetségsegítő Szervezetek Szövetsége. Budapest, 2014. pp. 11–63.
- Hamvai, Cs. – Pikó, B.: *Pozitív pszichológiai szempontok az iskola világában: a pozitív pedagógia kihívásai*. Magyar Pedagógia. 2008. Vol. 108. no. 1. pp. 71–92.
- Józsa, K. – D. Molnár, É. (2013): *The relationship between mastery motivation, self-regulated learning and school success: A Hungarian and wider European perspective*. In: Barrett, K. C. – Fox, N. A. – Morgan, G. A. – Fidler, D. J. – Daunhauer, L. A. (eds.): *Handbook of self-regulatory processes in development: New directions and international perspectives*. Taylor & Francis. New York and London, 2013. pp. 265–304.
- Józsa, K. – Wang, J. – Barrett, K. – Morgan, G.: *Age and cultural differences in self-perceptions of mastery motivation and competence in American, Chinese, and Hungarian school age children*. Child Development Research. 2014. pp. 1–16. DOI:10.1155/2014/803061
- Józsa, K. – Morgan, G. A. (2014): *Developmental changes in cognitive persistence and academic achievement between grade 4 and grade 8*. European Journal of Psychology of Education. 2014. Vol. 29. no. 3. pp. 521–535.
- Józsa, K. – Morgan, G. A.: *An Improved Measure of Mastery Motivation: Reliability and Validity of the Dimensions of Mastery Questionnaire (DMQ 18) for Preschool Children*. Hungarian Educational Research Journal. 2015. Vol. 5. no. 4. pp. 1–22.
- Kopp, M.: *Mikor káros a stressz? A stressz szerepe az egészségromlásban*. Hippocrates. 2003. Vol. 5. no. 1. pp. 44–48.
- Marchand, G. – Skinner, E. A.: *Motivational Dynamics of Children's Academic Help-Seeking and Concealment*. Journal of Educational Psychology. 2007. Vol. 99. no. 1. pp. 65–82.
- Margitics, F. – Pauwlik, Zs.: *Megküzdési stratégiák preferenciájának összefüggései az észlelt szülői nevelői hatásokkal*. Magyar Pedagógia. 2006. Vol. 106. no. 1. pp. 43–62.
- Oláh, A.: *Érzelmek, megküzdés és optimális élmény. Belső világunk megismerésének módszerei*. Trefort Kiadó, Budapest, 2005.
- Rózsa, S – Purebl, Gy. – Susánszky, É. – Kő, N. – Szadóczky, E. – Réthelyi, J. – Danis, I. – Skrabski, Á. – Kopp, M.: *A megküzdés dimenziói: a konfliktusmegoldó kérdőív hazai adaptációja*. Mentálhigiéné és Pszichoszomatika. 2009. Vol. 9. no. 3. pp. 217–241.
- Saadu, U. T. – Adedayo, A.: *Personality Types and Coping Strategies as Correlates of Students' Academic Achievement*. Journal of Educational and Social Research. 2013. Vol. 3. no. 5. pp. 17–24.

- Selye, J.: Stressz distressz nélkül. Akadémiai Kiadó. Budapest, 1976.
- Singer, E.: Coping with academic failure, a study of Dutch children with dyslexia. *Dyslexia*. 2008. Vol. 14. no. 4. pp. 314–333.
- Skinner, E. A. – Pitzer, J. R. – Brule, H. A.: *The role of emotion in engagement, coping, and the development of motivational resilience*. In: Pekrun, R. – Linnenbrink-Garcia, L. (eds.): *International Handbook of Emotions and Education* Taylor & Francis. New York, 2014. pp. 331–347.
- Skinner, E. A. – Pitzer, J. R. – Steele, J.: Coping as Part of Motivational Resilience in School: A Multidimensional Measure of Families, Allocations, and Profiles of Academic Coping. *Educational and Psychological Measurement*. 2013. Vol. 73. no. 5. pp. 803–835.
- Skinner, E. A. – Zimmer-Gembeck, M. J.: Review: The development of coping across childhood and adolescence: An integrative review and critique of research. *International Journal of Behavioral Development*. 2011. Vol. 35. no. 1. pp. 1–17.
- Takács, Á. – Kóbor, A. – Csépe, V. (2010): Zavarok a diagnózisban? A figyelmi atipikusság „intuitív diagnosztikája” és neuropszichológiai profilja. *Pszichológia*. 2010. Vol. 30. no. 3. pp. 253–271.
- Vierhaus, M. – Lohaus, A. – Wild, E.: The development of achievement emotions and coping/emotion regulation from primary to secondary school. *Learning and Instruction*. 2016. Vol. 42. no. 4. pp. 12–21.
- Yusoff, M. S. B.: Psychometric properties of the Secondary School Stressor Questionnaire among adolescents at five secondary schools. *Journal of Taibah University Medical Sciences*. 2015. Vol. 10. no. 2. pp. 159–168.
- Zimmer-Gembeck, M. J. – Skinner, E.A.: Adolescent coping profiles differentiate reports of depression and anxiety symptoms. *Journal of Adolescence*. 2015. Vol. 45. pp. 149–159.
- Zimmer-Gembeck, M.J. – Skinner, E. A. – Morris, H. – Thomas, R. (2012): Anticipated Coping With Interpersonal Stressors: Links With the Emotional Reactions of Sadness, Anger, and Fear. *The Journal of Early Adolescence*. 2012. Vol. 20. no. 10. pp. 1–17.

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