

## Stress and Perception of School Satisfaction on a Sample of Slovene Primary School Students

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### Abstract

The aim of our research was to determine the relationships between experiencing stress, coping strategies, coping self-efficacy and primary school students' school satisfaction. We were also interested in the predictive power of these variables on school satisfaction. A total of 512 students from the seventh, eighth and ninth grades participated in this study and the results show that primary school students which are feeling stressed are less satisfied with school. There is a negative correlation between stress and coping self-efficacy and a positive correlation between coping self-efficacy and instrumental-interactive coping strategies. Palliative coping strategies are negatively correlated with coping self-efficacy and school satisfaction, while instrumental-interactive coping strategies are positively correlated with school satisfaction. Results showed that instrumental-interactive and palliative coping strategies, as well as physical stressors, are very important predictors of school satisfaction. All the results have both theoretical and practical implications for coping with stress in primary school.

**Keywords:** students, stress at school, coping self-efficacy, coping strategies, school satisfaction

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### Introduction

Students spend a lot of time in school and are engaged with schoolwork. In school, they form different relationships with their teachers and peers. The school is also a place where students show their competencies which are often publicly assessed (Mikuž Kos, 1993). Due to everyday requirements, expectations and pressure, school can cause a considerable amount of stress among students (Agrawal, Garg, & Urajnik, 2010; Escobar et al., 2013; Jacobshagen, Rigotti, Semmer, & Mohr, 2009; Mumel, 1991). Koštal (2000) even found that school is the largest stressor for Slovene adolescents. Research also showed that experiencing stress is related to student satisfaction with school (Philips, 1993; Public Agenda, 2004) and their well-being (Middlebrooks & Audage, 2008). It was also determined that students' coping strategies mediate the relationship between stress and school satisfaction (Bordwine

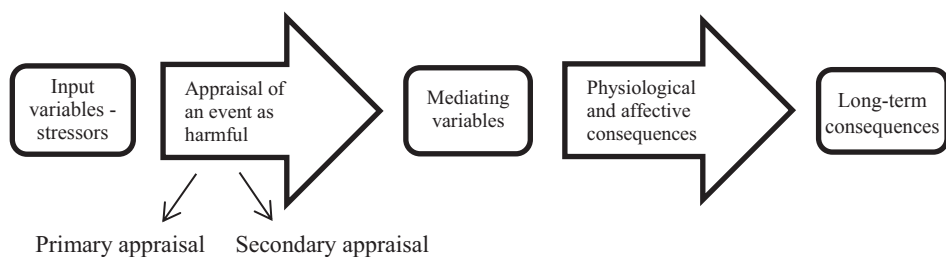
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& Huebner, 2010; Lewis, Huebner, Malone, & Valois, 2011). In our research, we investigated the relationships between stressors students experience in school, coping self-efficacy, their coping strategies, and their satisfaction with school. Previous studies primarily focused on investigating these relationships among university students and some researched relationships in secondary schools (Lyraikos, 2012; MacCann, Lipnevich, Burrus, & Roberts, 2012). According to our knowledge, not one study conducted so far has investigated these relationships in primary school; therefore, we tried to determine if the relationship between experiencing stress and school satisfaction exists already at this educational level.

The research is based on the Lazarus stress model (Lazarus, 1966; Lazarus & Folkman, 1984), which explains the relationships between stressors, appraisals of stress-provoking events, mediating variables (i.e. coping strategies) and the outcomes (e.g. physical and psychological health, life satisfaction). The Lazarus model is a framework for designing and investigating interventions in increasing an individual's competencies for coping with different challenges in life.

Figure 1. *Adapted Lazarus Stress Model (Adapted According to Lacković-Grgin, 2004)*



Lazarus defines stress as an inconsistency between the individual and the environment or as an inconsistency between the appraisal of demands in the environment and the appraisal of abilities for coping with them (Frydenberg, 2002). Different stressors are input variables in the model. In our research, input variables are school-related stressors.

The key element in the model is the individual's cognitive appraisal of the stress situation and the possibilities for action - this is the reaction of the individual to the situation (Lamovec, 1990). An individual first appraises the stress situation in two phases. During primary appraisal, one evaluates potential relevance or harmfulness of the situation (Colodro, Godoy-Izquierdo, & Godoy, 2010). If one appraises the situation as positive, the situation can be a challenge for that individual. If the situation is appraised as negative, that it will bring harm, threat or loss to that individual, that person has to make a secondary appraisal about the abilities to cope with the situation. Based on secondary appraisal, one decides which coping strategies to use (Frydenberg, 2008; Pisanti, Lombardo, Lucidi, Lazzari, & Bertini, 2008).

Coping with stress is a mediator between input and output variables (Colodro et al., 2010). It has two functions: to cope with the demands of a situation (i.e. coping directed toward solving the problem) and coping with undesired emotions (emotions related to coping) (Compas, Banez, Malcarne, & Worsham, 1991). Individuals usually use problem-directed coping strategies when they appraise the situation as acceptable, and emotion-related strategies when they appraise that they are not able to control or change the situation (Colodro et al., 2010). Successful coping with stress also has long-term consequences. One of them is satisfaction with school among students, which can profoundly influence their school well-being and school results (Jeriček, 2007b; Tian, Liu, & Gilman, 2010; Verkuyten & Thijs, 2002). Therefore, we included school satisfaction as an output variable in our research.

### **Stressors in School**

Research on school stressors found different sources of school-related stress. Carson and Bittner (1994) classified them into three groups: academic demands, interaction with teachers, and interaction with peers. Besides these three groups, some researchers also identified the group of physical stressors (Escobar et al., 2013; Šalehar Stupica, 1996).

The most important academic stressors in school are: fear related to poor academic achievements (Mencin Čeplak, 2000), test anxiety (Carson & Bittner, 1994), expectations regarding future education, inappropriate time management (De Anda et al., 2000), engagement in a large number of extracurricular activities (Escobar et al., 2013), very fast pace of instruction and high competitiveness in the class (Philips, 1993). These results were also confirmed by other studies (Mikuš Kos, 1991, 1993; Suldo, Shaunessy, Thalji, Michalowski, & Shaffer, 2009).

Conflicting relationships between teachers and students were found to have a very stressful effect on students (Carson & Bittner, 1994; Dernovšek, Gorenc, & Jeriček, 2012; Koštal, 2000; Mikuš Kos, 1993; Philips, 1993). For some of the students, the negative effect can result in their dropping out of school (Jeriček, 2007a). The relationships between teachers and students have an important impact on students' motivation and their engagement in school work and learning (Macklem, 2008). Good relationships are related to many positive outcomes in students, such as positive attitudes toward school, better school adaptation, higher achievement, higher academic self-esteem, and reduction of depressive symptoms in students (Košir, 2011; Macklem, 2008). On the other hand, conflicting relationships between teachers and students are related to behavioural problems and lower student achievements (Baroody, Rimm-Kaufman, Larsen, & Curby, 2014).

Students can also be affected by stressors resulting from their relationships within peer groups (Dernovšek et al., 2012). Conflict and bullying in school can result in lower achievements (Carson & Bittner, 1994), because a student who does not feel safe might have problems with concentration, engagement, and learning

during class (Philips, 1993). Agrawal et al. (2010) found that negative peer relationships make students feel uneasy and uncomfortable. On the contrary, good relationships in a class have a positive impact on students' behaviour, self-esteem and self-evaluations (Bolčina, 2000).

Another source of stressors in school can be the school environment with factors that are out of students' control. Physical stressors can include a wide variety of stressors: inappropriate school materials and resources (Jacobshagen et al., 2009), the number of students in a classroom, temperature, noise in the class and biological needs (Šalehar Stupica, 1996). A large number of students in a class can cause higher levels of stress due to lack of space and higher noise, which all result in a feeling of restriction (Escobar et al., 2013).

### **Coping with Stress in School**

Coping with stress is a process of constant information processing and evaluation of the changing relationship between the individual and the environment (Seiffge-Krenke, Weidemann, Fentner, Aegenheister, & Poebblau, 2001). Successful coping with stress includes adolescents' emotional control, constructive reasoning about the problem, behavioural self-regulation and control of autonomous conduct (Garcia, 2010).

Coping strategies can be classified according to two dimensions: orientation toward problem-solving versus orientation toward emotions (Folkman & Lazarus, 1988; Litman, 2006; Parker, Endler, & Bagby, 1993; Piko, 2001), and approach versus problem avoidance. Problem-oriented and approach strategies include strategies for changing stress situations, while avoidance and emotion-oriented strategies try to avoid stressors in an indirect manner, with reduction of experiencing emotions (Eschenbeck, Kohlmann, & Lohaus, 2007). Some researchers emphasised (e.g. Slivar, 1996) that emotion-oriented coping is less effective than problem-oriented coping due to its defensive nature, but Folkman (1984) stressed that problem orientation in stress situations is always accompanied by coping with emotions, which enables an individual to have some control over their emotions and thus better possibilities to solve the problem successfully.

In adolescents, some authors (e.g. Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000) differentiate between engagement and disengagement coping strategies. Engagement strategies include primary coping strategies, such as active coping with the problem, emotion regulation, expression, and secondary methods such as acceptance, cognitive restructuring and positive thinking. Disengagement strategies, on the other hand, include strategies directed away from stressors, individuals' thoughts and emotions (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001).

Koštal (2000) differentiates also between instrumental-interactive and palliative coping strategies in adolescents. Instrumental-interactive strategies are strategies

with an active approach to the problem with planning and executing a solution. An individual uses his own resources or other people. Palliative strategies are directed mainly to the reduction of emotions in a stressful situation. Thus, his thoughts and actions are not primarily directed toward problem-solving and abolishing its causes (Košťal & Boben, 2001).

Research showed a positive connection between active coping with school stressors and academic competencies, school achievement (Doron, Stephan, Maiano, & Scanff, 2011; Frydenberg, 1993; Jose & Huntsinger, 2005; Suldo, Shaunessy, & Hardest, 2008), and better relationships with peers and teachers (Suldo et al., 2008).

### *Coping Self-Efficacy*

The choice of coping strategies could also be affected by self-efficacy in coping with stress. Although Lazarus did not anticipate self-efficacy in coping as a mediator variable in his model, recent research revealed its significance (Bosman, Benight, Van der Knaap, Winkel, & Van der Velden, 2013; Kraaij, Garnefski, & Maes; 2002; Nicholls, Polman, Levy, & Borkoles, 2010; Pisanti et al., 2008). Self-efficacy in coping with stress is the individual's belief in their ability to cope successfully with dangers of harmful situations or events (Chesney, Neilands, Chambers, Taylor, & Folkman, 2006).

Studies showed a strong correlation between coping self-efficacy and effectiveness in coping with stress (Jex, Blies, Buzzell, & Primeau, 2001; Kraaij et al., 2002; Nicholls et al., 2010). Individuals with higher level of coping self-efficacy are more prone to actively engage in new, challenging situations and they persist longer, while individuals with lower levels of coping self-efficacy are more prone to invest their energy into coping with their negative emotions. Coping self-efficacy can impact the consequences of stressful situations (Pisanti et al., 2008), among them students' satisfaction with school. Therefore, we will include coping self-efficacy as a variable in our study, too. According to our knowledge, there have been no studies done on coping self-efficacy in primary school.

### *School Satisfaction*

Huebner (1994) defines school satisfaction as students' satisfaction with all school activities. Baker, Dilly, Aupperlee, and Patil (2003) describe school satisfaction as a subjective conative evaluation of perceived quality of life in school. Suldo et al. (2008) also found that school satisfaction fully mediates the relationship between school attachment and global well-being. Students which are more satisfied with their life (Lewis et al., 2011) are more connected with school, they experience positive emotions about school more frequently and they like to attend the school. The level of satisfaction with school affects students' well-being and engagement in school (Verkuyten & Thijs, 2002) and thus contributes to psychological,

psychosocial and educational development in students (Tian et al., 2010). The HBSC research (Health Behaviour in School-Aged Children) in Slovenia showed that children and adolescents who like to go to school report higher levels of well-being, they have better grades, and engage in less risky health-related behaviour (Jeriček, 2007b).

Many potential stressors can affect students' school satisfaction. This impact can depend on school climate, students' perceptions that they are safe in school, their perceptions that teachers support them (Papšova, Valihorova, & Nabelkova, 2012; Siddall, Huebner, & Jiang, 2013). Students that have better relationships with peers and teachers in the school participate more in school activities and they are more satisfied with school (Danielsen, Breivik, & Wold, 2011). On the other hand, daily stressors in school result in experiencing lower levels of happiness and higher distress (Kiang & Buchanan, 2014).

School satisfaction depends also on students' coping strategies. Approach-oriented coping strategies are positively related to school satisfaction, while avoidance-oriented strategies are related to lower levels of school satisfaction (Bordwine & Huebner, 2010). Reschly, Huebner, Appleton, and Antaramian (2008) found that experiencing positive emotions in school is related to adaptive coping strategies that can result in higher levels of students' engagement. Students with appropriate coping strategies are more ambitious in setting their goals about the future, they can adapt to the fast pace in the class easily, they enjoy the school more and are therefore less stressed than students with less appropriate coping strategies (Martin, Nejad, Colmar, & Liem, 2013).

### **The Purpose of the Study**

The growing body of research showed that a student can experience a high level of stress in school (Agrawal et al., 2010; Escobar et al., 2013), which is related to their well-being (Middlebrooks & Audage, 2008) and satisfaction with school (Philips, 1993; Public Agenda, 2004). The research focused on university and secondary school students (Lyrakos, 2012; MacCann et al., 2012), but left out primary school students, although the school environment and requirements in upper classes of primary school are very similar to secondary schools. Thus, we decided to study stress and its impact on upper primary school students. The purpose of the study, based on the adapted Lazarus stress model (Lacković - Grgin, 2004; Lazarus, 1966; Lazarus & Folkman, 1984), was to determine the relationship between the perception of stressors, coping self-efficacy, strategies for coping with stress and school satisfaction in the upper grades of primary school.

According to previous research on stressors and school satisfaction (Baroody et al., 2014; Dernovšek et al., 2012; Escobar et al., 2013; Suldo et al., 2009), we expected that perceptions of academic, teacher, peer and physical stress will be negatively correlated to school satisfaction (Hypothesis 1). Regarding self-efficacy

in coping with stress (Bosman et al., 2013; Kraaij et al., 2002; Pisanti et al., 2008), it was hypothesised that it will be negatively correlated to different kinds of school stressors and to the use of palliative coping strategies and that it will be positively correlated to the use of instrumental-interactive coping strategies and to school satisfaction (Hypothesis 2). Based on the research about coping strategies (Bordwine & Huebner, 2010; Doron et al., 2011; Martin et al., 2013) we expected that the use of instrumental-interactive coping strategies would be positively correlated to school satisfaction and the use of palliative coping strategies would be negatively correlated to school satisfaction (Hypothesis 3). We were also interested in the predictive power of selected variables on school satisfaction and expected that all the variables related to stress anticipated in the adapted Lazarus model (i.e. perceptions of school stressors, coping self-efficacy, coping strategies) would be significant predictors of school satisfaction (Hypothesis 4).

## Method

### *Participants*

A total of 512 students (228 boys and 284 girls) from the seventh (76 boys and 79 girls), eighth (74 boys and 100 girls) and ninth grade (78 boys and 100 girls) from five Slovene primary schools participated in the study. Their age ranged from 11.75 to 15.58 years, the mean age was 13.67 ( $SD=0.69$ ) years.

### *Instruments*

We used four questionnaires in the study. Because of the lack of appropriate questionnaires for measuring stressors and coping self-efficacy in primary school, we developed them for the purposes of this study.

We developed the *School Stressors Questionnaire* (SSQ), based on a previous research, which found sources of stress in academic demands, interaction with teachers and peers and in physical characteristics of the school environment (Carson & Bittner, 1994; Escobar et al., 2013; Šalehar Stupica, 1996). We constructed several items for each of the above-mentioned stressors. First, we discussed them with an 11-year-old girl to check understanding and then we applied them in the seventh grade. After analysis, some of the items were rewritten or left out of the questionnaire. The final version of the School stressors questionnaire consists of 22 items. For each item students estimate the level of stress caused by the stressor on a 5-point scale (0 – *it does not happen to me or it causes no stress*, 1 – *causes a low level of stress*, 2 – *causes a moderate level of stress*, 3 – *causes a considerable level of stress* and 4 – *causes a lot of stress*). Kaiser-Mayer-Olkin (KMO) tests showed the appropriateness of sampling (.882) and Bartlett test of sphericity ( $\chi^2=4268.31$ ,  $p<.0001$ ) showed that correlations are high enough for the principal component

analysis. Principal component analysis (direct oblimin rotation) and Scree test revealed the existence of four factors that explain 54.34% of variance. All items have communalities higher than 0.50 (Appendix 1, Table A1). The factors are as follows:

1. *academic stressors* (items: 3, 6, 11, 16, 17, 20, 22; 19.27% of explained variance; Cronbach  $\alpha$  is .80), include items about experiencing stress related to school activities and duties (e.g. *I have no energy for extracurricular activities because of the school work.*).
2. *relations with teachers* (items: 1, 4, 10, 14, 15, 19; 22.17% of explained variance; Cronbach  $\alpha$  is .85) include stressors related to relationships between students and teacher in the school (e.g. *The teacher is unfair.*).
3. *relations with peers* (items: 2, 5, 8, 9, 18, 21; 19.39% of explained variance; Cronbach  $\alpha$  is .83) include stressors relating to peer relationships (e.g. *Schoolmates make fun of me.*).
4. *physical stressors* (items: 7, 12, 13; 10.11% of explained variance, Cronbach  $\alpha$  is .55) are related to physical stressors in the school environment (e.g. *Chairs and tables are uncomfortable.*).

*Coping with stress self-efficacy scale* was developed according to Bandura (2006) recommendations for constructing self-efficacy scales. We developed items in the scale in the same way as SSQ. The final version consists of 12 items about students' beliefs in their competency for effective problem solving in school (e.g. *Problems do not throw me off track.*). Students respond to items on a 10-point scale (0 – *I am completely convinced that I cannot do this*; 5 – *I am moderately convinced that I can do this*; 10 – *I am completely convinced that I can do this*). Principal component analysis (direct oblimin rotation) showed the existence of a single factor explaining 46.82% of the variance. All items have communalities higher than 0.50 (Appendix 2, Table B1). Cronbach alfa reliability coefficient is .89.

*School Satisfaction Scale* is one of the five scales from MSLSS (*Multidimensional students' life satisfaction scale*; Huebner, 2001). It consists of eight items measuring students' attitudes toward school (e.g. *School is interesting.*). Students respond to each item on a 6-point scale (1 – *strongly disagree*, 2 – *moderately disagree*, 3 – *mildly disagree*, 4 – *mildly agree*, 5 – *moderately agree*, 6 – *strongly agree*). Cronbach alfa reliability coefficient in our study is .84.

*Questionnaire for coping with difficulties for adolescents* (Frydenberg & Lewis, 1996; adaptation Kořtal & Boben, 2001) measures coping strategies in students aged between 12 and 18 years. For the purposes of the study, we used the long version containing 79 items related to coping with difficulties in school (e.g. *I work a lot.*). Students answer to each item on a 5-point scale (1 – *is not true for me*, 2 – *seldom true for me*, 3 – *sometimes true for me*, 4 – *often true for me* and 5 – *almost always true for me*).



The questionnaire includes two groups of coping strategies: instrumental-interactive and palliative. Instrumental-interactive group consists of 10 subscales measuring strategies: other people support, high work intensity to achieve something, good friends, directedness to positive things, search for relaxation, problem-solving, activities in the community, search for professional help, search of inclusion and physical relaxation. Palliative group consists of 8 subscales measuring strategies: wishful thinking, reduction of tension, ignoring difficulties, shutting oneself away, worrying, poor mastery, self-accusations and search for spiritual support. In our study, we used both groups of strategies as a whole, namely instrumental-interactive and palliative coping strategy. Cronbach alfa reliability coefficients in our study for both groups were .88 and .86.

### *Procedure*

First, the informed consents from parents of students participating in the study were collected. Data was collected in February 2014. The application of the questionnaires lasted between 30 and 40 minutes and it took place during regular classes, according to possibilities in the school schedule. Statistical analyses were conducted with SPSS 20.0.

## **Results**

### *Correlations Between Variables*

First, a correlation analysis was performed. Means, standard deviations and Pearson's correlation coefficients are included in Table 1.

Table 1. *Means, Standard Deviations and Pearson's Correlation Coefficients of Measured Variables*

	<i>M</i>	<i>SD</i>	Academic	Teacher	Peer	Physical	S-E.	Instr.	Pall.	Satisf.
Academic	1.37	0.81	-							
Teacher	0.98	0.93	.48**	-						
Peer	0.63	0.76	.39**	.55**	-					
Physical	1.00	0.92	.39**	.20**	.13**	-				
S-E.	6.44	1.73	-.29**	-.09*	-.10**	-.13**	-			
Instr.	14.30	2.10	.02	.05	.06	-.03	.40**	-		
Pall.	11.07	2.12	.40**	.20**	.16**	.14**	-.25**	.31**	-	
Satisf.	3.47	1.11	-.24**	-.16**	.04	-.22**	.27**	.26**	-.18**	-

Academic = academic stressor; Teacher = stressors caused by relationships with teachers; Peer = stressors caused by relationships with peers; Physical = physical stressors; S-E = self-efficacy in coping with stress; Instr. = instrumental-interactive strategies for coping; Pall. = palliative strategies; Satisf. = school satisfaction; \* $p < .05$ ; \*\* $p < .01$ .

Results in Table 1 show significant low to moderate inter-correlations between individual groups of stressors. Significant low and negative correlations between academic stressors, stress caused by teachers, physical stressors and school satisfaction were established. Students experiencing more stress from these groups are less satisfied with school. Significant and low negative correlations were also found between the individual groups of stressors and self-efficacy in coping with stress, except between academic stressors and self-efficacy, where the correlation is moderate. Students experiencing higher levels of stress have lower levels of self-efficacy in coping with it.

The correlation between self-efficacy in coping and instrumental-interactive coping strategies is significant, moderate and positive, while correlation with palliative strategies is low and negative. Students which estimate their coping self-efficacy higher, predominantly use instrumental coping strategies, while students with lower self-efficacy in coping use more palliative strategies. Coping self-efficacy is also low and positively correlated to school satisfaction. Students with higher self-efficacy are more satisfied with school.

Significant, low and positive correlations were established between instrumental-interactive strategies and school satisfaction, while correlations between palliative strategies and school satisfaction are low and negative. Students that mainly use instrumental-interactive strategies for coping are more satisfied with school. On the other hand, students which use mainly palliative coping strategies are less satisfied.

### *School Satisfaction Predictors*

We used hierarchical regression analysis to predict school satisfaction. All the requirements for regression were met: observation independence, homoscedasticity and linearity. We excluded peer stressors from the model, while the correlation between them and school satisfaction was statistically insignificant. The inclusion of variables in the model was based on the Lazarus model. The predictors were included in three steps: stressors (academic, teachers and physical) in the first step, coping self-efficacy in the second step and coping strategies (instrumental–interactive and palliative) in the third step. Results are shown in Table 2.

Table 2. *Results of Hierarchical Regression Analysis in Predicting School Satisfaction*

Predictors	Model 1			Model 2			Model 3		
	$R^2$	$\Delta R^2$	$\beta$	$R^2$	$\Delta R^2$	$\beta$	$R^2$	$\Delta R^2$	$\beta$
Academic Stressors	.08**	.08**	-.17**	.13**	.05**	-0.09	.18**	.05**	-.08
1. step Relationships with Teachers			-.03			-0.05			-.05
Physical Stressors			-.16**			-0.16**			-.15**
2. step Coping Self-efficacy						.23**			.08
3. step Instrumental Strategies									.28**
Palliative Strategies									-.17**

\* $p < .05$ ; \*\* $p < .01$ .

The variables included in the research can explain 18% of variance in school satisfaction. Results show that the higher school satisfaction can be expected in students using instrumental-interactive strategies and lower school satisfaction in students using palliative strategies. Higher school satisfaction can also be expected in students which feel fewer physical stressors.

In the first step, we can explain only 8% of variance in school satisfaction with perceived school stressors. Significant predictors are academic and physical stressors. When we added coping self-efficacy in the second step, additional 5% of variance was explained. Self-efficacy in coping is a significant positive predictor, while only physical stressors remained a significant negative predictor of school satisfaction. In the third step, we included coping strategies and explained additional 5% of variance in school satisfaction. In the final model, significant negative predictors of school satisfaction were physical stressors and palliative strategies, while instrumental strategies were positive predictors.

## Discussion

Stress is a part of everyday life. Adolescents can be even more prone to feel stressed due to developmental changes during this period in life (Fischhoff, Nightingale, & Iannotta, 2001). Students are obligated to attend school, they cannot avoid it and they spend a considerable amount of time there. Research (e.g. Frydenberg, 2008; Hampel, Meier, & Kümmel, 2008; Jeriček, 2007a; Seiffge-Krenke, Aunola, & Nurmi, 2009) showed school as one of major sources of stress in adolescents, which affects their school satisfaction and learning results. Knowledge about stressors and other factors influencing stress in school and school satisfaction

is important for the development of interventions to prevent it. Therefore, we investigated the relationships between school stressors, self-efficacy in coping, actual use of coping strategies and school satisfaction in our study.

### *The Relationships Between Measured Variables*

The results showed that we can accept almost the entire Hypothesis 1, namely, students that perceived more stressors from different groups will be less satisfied with the school. In accordance with findings of other research regarding correlations between academic stressors and school satisfaction (Elmore & Huebner, 2010; Kiang & Buchanan, 2014), we found that students feeling higher academic stress are less satisfied with the school. Academic stressors are related to students' assessment and grading, to incomprehensible teachers' explanations and to the high amount of schoolwork. Our results also corroborate the results showing that problematic relationship with teachers can be an important stressor and are also related to school satisfaction (Jeriček, 2007a; Košir, 2011; Macklem, 2008). Especially stressful could be the student's perception that they are disliked by the teacher, or the feeling of unjust treatment by a teacher (i.e. subjective grading or unsuitable teacher's remarks in the class). We also found that physical stressors are related to school satisfaction, as was already established before (Escobar et al., 2013). Many students in the class and noise they make can be an important stressor. Contrary to our expectations and other research (Agrawal et al., 2010; Mikuš Kos, 1991), we did not find a connection between stressors caused by peers and school satisfaction. This result can be interpreted with very low estimations of stressors by peers in our study. Items in peer stressors scale include peer stressors that are related to bullying i.e. exclusion by peers, making fun of someone or physical attacks by peers. The average perception by students is that it causes them no stress or very low levels of stress; therefore, it is not significantly connected to school satisfaction.

We can also accept Hypothesis 2 about the negative correlation between coping self-efficacy and other variables in the study. Research showed that an individual's coping self-efficacy helps him/her to reduce, mitigate or prevent stress in very demanding situations (Colodro et al., 2010). We found negative correlations between coping self-efficacy and all groups of stressors. The highest correlation was established between academic stressors and coping self-efficacy. If a student believes that he or she is able to cope efficiently with a certain difficulty, he/she will anticipate potential stressors as less threatening (Čot, 2004; Pisanti, 2012).

We can confirm the positive relationships between coping self-efficacy and instrumental-interactive coping strategies and negative relations between coping self-efficacy and palliative strategies for coping with stress, too. Previous research (e.g. Hsieh, Sullivan, Sass, & Guerra, 2012; Jex et al., 2001; Mann, Nota, Soresi, Ferrari, & Frydenberg, 2011) showed that individuals with higher coping self-efficacy more often use strategies directed toward problem-solving, they more often

actively and appropriately approach problem situations. They also showed that individuals with lower coping self-efficacy more often use palliative coping strategies (Hsieh et al., 2012; Mann et al., 2011; Pisanti et al., 2008). We confirmed the same results in primary school students. Students with higher coping self-efficacy more often use instrumental-interactive coping strategies and students with lower coping self-efficacy use palliative coping strategies in stressful situations.

The results showed a positive correlation between coping self-efficacy and school satisfaction. Individuals with higher coping self-efficacy are more successful in adapting to stressful situations (Meuller & Major, 1989; according to Pisanti et al., 2008) and this finding is also valid for primary school students. Students with high coping self-efficacy are more likely to have positive attitudes toward school, enjoy school activities and are more satisfied with school.

Our results are also consistent with the Bordwine and Huebner (2010) research, which revealed positive correlations between approaching strategies for coping with stress and school satisfaction, while avoiding strategies (MacCann et al., 2012) are related to undesired behaviour and lower school satisfaction (Hypothesis 3). Instrumental-interactive strategies in comparison with palliative strategies enable students to experience more positive emotions in school - students are more engaged and achieve higher results (Reschly et al., 2008). All these experiences can result in a higher level of school satisfaction. On the other hand, the use of palliative strategies can cause negative emotions, less engagement, lower achievement and lower level of school satisfaction.

### *Predictors of School Satisfaction*

School is an important factor, which influences students' lives. It can impact students' self-esteem, their attitudes toward life, well-being and health (Jeriček, 2007a). Therefore, it is very important that the students are satisfied with school and enjoy school activities. On the basis of the Lazarus model and other research (Lacković - Grgin, 2004; Lazarus, 1966; Lazarus & Folkman, 1984; Pisanti et al., 2008; Singh & Bussey, 2010) we hypothesised that school stressors, coping self-efficacy, and coping strategies would be significant predictors of school satisfaction (Hypothesis 4). Our results partially confirmed this hypothesis. School satisfaction can be predicted with all three groups of stress-related variables. Perceived stressors predict 8% of variance in school satisfaction, coping self-efficacy predicts additional 5% of variance and coping strategies another 5% of variance. All the variables, thus, explain 18% of variance in school satisfaction.

A detailed analysis of the results reveals academic and physical stressors as significant predictors in the first step. Students experiencing more academic and physical stressors are less satisfied with school. In the second step, coping self-efficacy additionally explained school satisfaction. Students with higher coping self-efficacy are more satisfied with school. Nevertheless, in this step only physical

stressors remained a predictor of school satisfaction. In the third step, both coping strategies additionally explained school satisfaction. The use of instrumental-interactive strategies is a positive predictor, while palliative strategies are a negative predictor of school satisfaction. Among other predictors, only physical stressors remain significant. Coping self-efficacy loses its predictive power.

We can explain a moderate level of school satisfaction with our regression model. Instrumental-interactive coping strategies explain the largest part of school satisfaction. Students' using instrumental-interactive strategies to a greater degree are more satisfied with school. School satisfaction can also be explained by lower levels of palliative strategies and absence of physical stressors. Our results are consistent with the results of approach strategies as positive predictors of school satisfaction (Bordwine & Huebner, 2010; MacCann et al., 2012) and findings on palliative strategies as negative predictors of school satisfaction (MacCann et al., 2012). They showed that a student's actual ability to cope with stress is a more important predictor than the perception of stress and students' coping self-efficacy. When we added coping self-efficacy to the model, academic stressors lost their predictive power for school satisfaction. The same happened with coping self-efficacy when we added coping strategies to the model. In the final model, perceptions of physical stressors in the class remain important predictors of school satisfaction. Too many students in the class can cause a lot of stress (Philips, 1993), as well as too noisy classes that do not offer students the possibility to remain concentrated on work and to feel satisfied with school (Public Agenda, 2004). Physical stressors are in comparison to academic, peer-related and teachers' stressors those that are out of students control. Therefore, students are less able to change them and they can have a higher impact on school satisfaction.

## **Conclusions**

Results of our study have theoretical and practical implications. The most important contribution of our study to existing knowledge on stress and school satisfaction is its extension to the lower levels of education and lower age of students. We found that we can explain school satisfaction with stressors, coping self-efficacy and coping strategies already in primary school. Other studies found similar results in high school (MacCann et al., 2012). Therefore, it is very important to be aware of potential impacts of stress already in primary school, to know the sources of stress, potential mediator variables and to use this knowledge to plan interventions to reduce stress in students. The second important contribution of our study is the development of two instruments that have not yet been developed for primary school level. They can become important tools for stress assessment and a starting point for planning intervention at these age levels.

Interventions for stress reduction could be directed toward reduction of school stressors or toward increasing students coping abilities. They could include learning strategies training in order to reduce academic stressors, as well as instrumental coping strategies training that would increase students coping self-efficacy and their coping abilities. Interventions could also include teachers and their professional development, especially effective classroom management which reduces distractors in class (e.g. level of noise) and enables students to actively engage in learning. They could also stress the importance of good relationships between teachers and students, between peer in the classroom and help teachers develop them and thus reduce potential stressors in the class.

Some limitations should be kept in mind when interpreting our results, as well as possibilities for further research. The sample in the study was convenient and it consists of students from five schools. Therefore, the results cannot be generalised to the entire school population. In future research, a more representative sample should be used. Further studies could also be directed toward the improvement of the questionnaire about school stressors. The most problematic is the relatively low reliability of the physical stressors scale. The scale consists of three items that are related to the number of students and noise in the class. Some other physical stressors could also be added (e.g. temperature, light, available materials). Results also showed that we can predict a significant, but small part of variance in school satisfaction, thus some other predictors that might impact school-related stress and school satisfaction could be investigated, too (e.g. school culture, student's achievement, their personality traits). Future research could also study stress in different periods during the school year, since school stress can fluctuate during the school year considerably.

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## **Stres i percepcija zadovoljstva školom na uzorku osnovnoškolskih učenika iz Slovenije**

### **Sažetak**

Cilj je našeg istraživanja bio odrediti povezanost između doživljavanja stresa, strategija suočavanja, samoeфикаsnosti u suočavanju i zadovoljstva školom kod osnovnoškolskih učenika. Također, cilj je bio ispitati i u kojoj su mjeri navedene varijable prediktori zadovoljstva školom. U istraživanju je sudjelovalo 512 učenika sedmih, osmih i devetih razreda. Rezultati su pokazali da su učenici koji izvještavaju da su pod stresom manje zadovoljni školom. Dobivena je negativna povezanost između stresa i samoeфикаsnosti u suočavanju te pozitivna povezanost između samoeфикаsnosti u suočavanju i instrumentalno-interaktivnih strategija suočavanja. Palijativne su strategije suočavanja negativno povezane sa samoeфикаsnosti u suočavanju i sa zadovoljstvom školom, dok su instrumentalno-interaktivne strategije suočavanja pozitivno povezane sa zadovoljstvom školom. Rezultati su pokazali da su instrumentalno-interaktivne i palijativne strategije suočavanja te fizički stresori vrlo važni prediktori zadovoljstva školom. Svi rezultati imaju teorijske i praktične implikacije za suočavanje sa stresom u osnovnoj školi.

**Ključne riječi:** učenici, stres u školi, samoeфикаsnost u suočavanju, strategije suočavanja, škola

## **Estrés y percepción de la satisfacción escolar en la muestra de los alumnos eslovenos de colegio**

### **Resumen**

El objetivo de esta investigación fue determinar la relación entre el estrés, las estrategias para su afrontamiento, la autoeficacia y la satisfacción escolar en el colegio. También estábamos interesados en la fuerza predictiva de estas variables para la satisfacción escolar. 512 alumnos de la 7ª, 8ª y 9ª clase participaron en esta investigación y los resultados demuestran que los alumnos de colegio que se sienten estresados están menos satisfechos con la escuela. Existe una correlación negativa entre el estrés y la autoeficacia, y una correlación positiva entre la autoeficacia y las estrategias de afrontamiento instrumental-interactivas. Estrategias de afrontamiento paliativas están correlacionadas negativamente con la autoeficacia y la satisfacción escolar, mientras que las estrategias de afrontamiento instrumental-interactivas están correlacionadas positivamente con la satisfacción escolar. Los resultados demostraron que las estrategias de afrontamiento instrumental-interactivas y paliativas, tanto como los factores físicos de estrés, son predictores muy importantes de la satisfacción escolar. Todos los resultados tienen implicaciones teóricas y prácticas para afrontar el estrés en colegio.

**Palabras claves:** alumnos, estrés escolar, autoeficacia, estrategias de afrontamiento, escuela

## Appendix 1

Table A1. *School Stressors Questionnaire (SSQ) Items and their Loadings from Principal Component Analysis (N=512)*

Items - School stressors questionnaire	1	2	3	4
15 The teacher is unfairly punishing me.	<b>.80</b>	.30	.32	.19
14 The teacher bears a grudge against me.	<b>.80</b>	.35	.22	.18
10 The teacher makes fun of me in front of the entire class.	<b>.77</b>	.25	.49	.03
4 The teacher treats me unfairly.	<b>.75</b>	.36	.28	.18
19 The teacher accuses me of cheating.	<b>.74</b>	.27	.39	-.03
1 The teacher does not like me.	<b>.63</b>	.35	.22	.17
16 I have problems learning new material.	.28	<b>.76</b>	.28	.26
17 I have difficulties following teacher's explanation.	.36	<b>.73</b>	.32	.36
11 I don't understand the subject matter explained by the teacher.	.37	<b>.73</b>	.21	.31
3 I am afraid of oral assessment.	.17	<b>.69</b>	.14	-.10
22 The teacher often asks me a question, which I cannot answer.	.39	<b>.63</b>	.28	.32
6 I feel sick before written assessment.	.30	<b>.61</b>	.16	.06
20 I have no energy for extracurricular activities because of schoolwork.	.21	<b>.53</b>	.26	.39
9 My peers make fun of me behind my back.	.45	.23	<b>.83</b>	.04
2 Schoolmates exclude me.	.41	.30	<b>.79</b>	.09
5 Schoolmates make fun of me.	.42	.24	<b>.79</b>	-.03
8 Schoolmates physically attack me during breaks.	.49	.19	<b>.73</b>	.02
18 It's hard for me to make new friends at school.	.11	.32	<b>.62</b>	.08
21 I don't know with whom to eat lunch.	.14	.15	<b>.50</b>	.31
12 There are too many students in the class.	.18	.21	.08	<b>.80</b>
7 Chairs and tables are very uncomfortable.	.14	.14	-.05	<b>.64</b>
13 There is a lot of restlessness in the class.	.07	.22	.24	<b>.61</b>

*Note.* Factor loadings >.50 are in boldface; 1 = relations with teachers, 2 = academic stressors, 3 = relations with peers, 4 = physical stressors.

Table B1. *Coping with Stress Self-Efficacy Scale Items and their Loadings from Principal Component Analysis (N=512)*

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Items - Coping with stress self-efficacy scale	Component
	1
1. When a problem arises, I can face it.	.68
2. I solve my problems with deliberation and confidence.	.72
3. I cope with difficulties successfully.	.73
4. I successfully solve difficulties at school.	.74
5. When I encounter a problem, it is not difficult for me to cope with it.	.69
6. Problems do not throw me off track.	.53
7. When I face a difficulty, I know I will find a solution.	.70
8. I have a positive approach to problems.	.71
9. I remain calm when I encounter a problem.	.73
10. I put negative thoughts aside.	.63
11. I successfully find a solution for the problem at hand.	.71
12. I always think positive.	.61

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