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## The Role of Parental Self-Efficacy in Explaining Children's Academic Outcomes

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Students' educational outcomes are influenced by several factors that are not directly related to their personal characteristics, among which parental beliefs and behaviours are of special relevance. The present study was conducted on a sample of 301 primary school students and their parents, who completed a set of prepared questionnaires used for investigating the contribution of parental self-efficacy and the perception of parental involvement to students' academic achievement, perceived academic control and achievement goals. The obtained results indicated parental self-efficacy as a predictor of perceived academic control and avoidance goals, whereas perception of parental involvement predicted perceived academic control, mastery approach and work avoidance goals. These findings confirm and extend previous knowledge regarding the relevance of parents' engagement to children's educational outcomes.

**Keywords:** academic outcomes, achievement goals, motivation, parental self-efficacy, perception of parental involvement

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## Vloga samoučinkovitosti staršev pri pojasnjevanju učnih dosežkov otrok

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≈ Na učne dosežke učencev vplivajo številni dejavniki, ki niso neposredno povezani z osebnostnimi značilnostmi učencev; tako imajo na primer pomemben vpliv prepričanja staršev in njihovi vzorci vedenja. Raziskava je bila izvedena na vzorcu 301 osnovnošolca in njihovih staršev. Udeleženci so izpolnili vprašalnike, s katerimi smo ugotavljali vlogo zaznane samoučinkovitosti staršev in pri učencih zaznane vključenosti staršev v šolsko delo pri učnih dosežkih otrok, zaznanega nadzora nad učenjem in doseganja učnih ciljev. Zaznana samoučinkovitost staršev se je izkazala za pomemben napovednik zaznanega nadzora nad učenjem s strani učencev in ciljev izogibanja, zaznana vključenost staršev v šolsko delo otrok pa je bila pomemben napovednik zaznanega nadzora nad učenjem in ciljev obvladovanja ter ciljev izogibanja delu. Ugotovitve raziskave potrjujejo in dopolnjujejo izsledke o pomenu vključenosti staršev v šolsko delo pri učnih dosežkih otrok.

**Ključne besede:** učni dosežki, učni cilji, motivacija, samoučinkovitost staršev, zaznana vključenost staršev

## Introduction

When we consider students' academic accomplishments, we typically believe that the students' own characteristics, such as cognitive abilities and styles, beliefs, emotional processes or personality traits, govern their success and behaviours in school. However, other people, such as family members, also contribute to children's academic development in many ways, e.g., by preparing them for school, helping them learn and establish learning habits, or participating in their school life (Desforges & Abouchaar, 2003; Epstein, 1990). Generally, parental involvement may be conceptualised in different ways, typically including various activities occurring at home or at school, such as talking with children about school activities or supervising their homework, communication with school, as well as participating in school boards and activities (Bakker et al., 2007; Pomerantz et al., 2007). Such involvement is important for various child outcomes (c.f. Fan & Chen, 2001; Patall et al., 2008). However, although previous research has demonstrated the general relevance of parental characteristics and behaviours for children's academic lives, results pertaining to the impact of parents' and children's beliefs suggest somewhat more equivocal findings, in the sense that their contribution depends on the context of parental involvement and the nature of the investigated academic outcomes (Barger et al., 2019; Boonk et al., 2018; Deslandes & Bertrand, 2005; Silinskas et al., 2015; Wilder, 2014). Given this inconsistency, the present study aimed to study the differential contributions of parents' and students' beliefs regarding parental involvement to several important educational outcomes.

### Children's understanding of their own school involvement and parents' support

In addition to academic achievement, which is often considered a key educational outcome of students, children's beliefs regarding their own academic abilities represent an important element of their approach to school, significantly affecting their academic success. In this context, perceived academic control is regarded as a construct associated with academic self-efficacy. It reflects students' beliefs regarding their ability to successfully accomplish relevant academic outcomes (Perry, 1991; Perry et al., 2001) and has previously been associated with academic adjustment, motivation, the use of efficient learning strategies and achievement among university, as well as primary and secondary students (Perry et al., 2005; Perry et al., 2001). Furthermore, perceived academic control positively affects children's emotional experiences: higher levels

are associated with experiencing more pride and satisfaction, and less anxiety or boredom in school (Perry et al., 2005; Perry et al., 2001). Therefore, the way children view their own capacities can be considered as one of crucial educational outcomes, strongly influencing their school success as well as other behaviours, both academic and non-academic.

Another construct that is highly relevant to understanding children's approach to school and academic success is learning motivation. It has previously been indicated that one of the crucial components of students' motivation is achievement goals, which reflect the purpose of the individual's engagement in a certain activity (Eccles, 2005; Wigfield & Eccles, 2000). According to the 2 x 2 achievement goal framework, these goals may be differentiated based on their valence and standards used for judging the outcomes of one's engagement (Elliot & McGregor, 2001). We typically distinguish between positive goals directed towards achieving success and more negative ones directed towards avoiding failure (approach vs. avoidance goals), as well as between goals directed towards mastering a task and those aimed at showing one's superior performance (mastery vs. performance goals) (Elliot & McGregor, 2001). This framework therefore differentiates between four different goals: mastery approach, mastery avoidance, performance approach and performance avoidance. Among these, the mastery approach goal refers to the individual's tendency to become proficient with respect to the presented materials as best as possible, whereas the mastery avoidance goal refers to their inclination to avoid situations in which these materials are not learned as well as they should be. The performance approach goal refers to a person's tendency to achieve more than others, in contrast to the performance avoidance goal, which is related to their propensity to avoid situations in which they are outperformed by others. In addition to these goals, it has been suggested that work avoidance should also be viewed as a separate achievement goal, reflecting the individual's proclivity for achieving the desired results by investing the least amount of effort (Kaliski et al., 2006). The relevance of achievement goals has been demonstrated repeatedly, with previous studies indicating their associations with academic achievement, emotions experienced in school and other educational outcomes (Church et al., 2001; Elliot & Thrash, 2001; Harackiewicz et al., 2000; Pekrun et al., 2006, 2009).

Whereas children's views about their own abilities and motives for learning may be seen as relevant learning outcomes, these are influenced by other types of students' beliefs, primarily those regarding parents' involvement in their education. Previous studies have indicated that children's perceptions of events often determine how external influences will in fact influence their behaviours (Dornbusch et al., 1987; Grolnick et al., 1991; Silinskas & Kikas, 2019),

suggesting that parental involvement should be explicitly perceived as present, benevolent and helpful by children in order to positively influence their behaviours. In accordance with this, it has been demonstrated that student reports of parents' involvement are associated with their academic self-efficacy, learning motivation and self-regulatory strategy use (Gonzalez-DeHass et al., 2005; Grolnick & Slowiaczek, 1994; Marchant et al., 2001). However, parental help that is perceived as intrusive or misunderstanding may also have detrimental effects, suggesting that the way children conceptualise parental interest in their schooling may be crucial in determining its later impact (Moroni et al., 2015).

### **Parents' views of their own involvement in children's school lives**

Similar to the effects of students' beliefs regarding their own abilities and those of their parents, beliefs held by parents may also profoundly impact their own behaviours as well as students' school behaviours. Although parental involvement in children's schooling depends on numerous factors, such as their demographic status, including race, gender or educational and socioeconomic status (Davis-Kean, 2005; Desimone, 1999; Haveman & Wolfe, 1995; Klebanov et al., 1994), their abilities and knowledge, and own beliefs regarding the nature of the school system (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005; Walker et al., 2005), it is also highly associated with their views regarding their ability to influence children's educational abilities through their own involvement, i.e., parental self-efficacy (Bandura, 1977; Hoover-Dempsey & Sandler, 1995; Hoover-Dempsey et al., 2005). Such cognitions represent a context-specific type of self-efficacy beliefs that, according to the social cognitive theory, should be viewed as one of main determinants of successful goal accomplishment (Bandura, 1986, 2006). In accordance with this, parental self-efficacy is relevant to successful parenthood, as parents who feel more competent in their parental role typically use more constructive and adaptive parental methods and are more satisfied with their parenting than parents who perceive themselves as less competent (Bugental et al., 1989; Coleman & Karraker, 2000; Keresteš et al., 2011). Furthermore, it has been suggested that higher parental self-efficacy is related to more pronounced parental involvement in children's school life, often associated with students' better academic achievements (Grolnick et al., 1997; Seefeldt et al., 1998; Shumow & Lomax, 2002). However, other studies have failed to establish such influences (Anderson & Minke, 2007; Deslandes & Bertrand, 2005; Reed et al., 2000), and it is this discrepancy that provided the motivation for investigating the impact of parental self-efficacy on a range of educational outcomes addressed in the present study.

## The present study

The present study investigated the relevance of parents' self-beliefs and students' perception of their parents' engagement for a set of important academic criteria among a group of Croatian primary school students and their parents. We focused on primary students because, in Croatia, these students typically get the most parental help with learning and can benefit most from understanding the impact of such help. In doing so, we wanted to investigate the relevance of parental self-efficacy and children's perception of parental involvement to students' academic achievement, self-efficacy beliefs and postulated achievement goals. In order to achieve these goals, we asked students to report their views of their parents' involvement and hypothesised that more positive perceptions would be associated with higher academic achievement, higher perceived academic control and more pronounced mastery and approach achievement goals. Similarly, we hypothesised that parental perception of their own efficacy would be associated with students' more favourable educational outcomes; namely, higher academic achievement, higher perceived academic control, and more pronounced mastery and approach achievement goals.

Finally, in exploring the relationships between parents and children's understanding of parental involvement, on the one hand, and children's educational outcomes, on the other, we controlled for demographical characteristics of both parents and children that may be of relevance in this context. In doing so, we hypothesised that girls would show somewhat higher academic achievement and lower performance goals than boys (Anderman & Anderman, 1999; Patrick et al., 1999; Pomerantz et al., 2002). Furthermore, we expected that children of better-educated parents would show more positive educational effects, as previous studies have shown that such parents often display more interest in children's learning and choose behaviours aimed at motivating children towards engaging in school-related activities (Alexander et al., 1994; Dauber et al., 1996; Davis-Kean, 2005; Grolnick & Slowiaczek, 1994; Hoff, 2003; Lee & Croninger, 1994).

## Methods

A total of 301 students of final primary school grades participated in the present study. All of the participants were familiarised with the purpose of the study prior to its commencement and signed an informed consent before entering the study. The sample of 301 students included 134 (45.5%) boys and 167 girls (55.5%), who were attending the seventh (167; 55.5%) and eighth (134; 45.5%) grade in three Croatian primary schools.

In addition, 301 parents – one from each interviewed student (mother or father) – also participated in the study, forming a sample comprising 60 (19.9%) fathers and 241 (80.1%) mothers. Among the mothers, 12 (5.0%) had only completed primary school, 166 (68.9%) had completed secondary school, and 63 (26.1%) had finished university or postgraduate studies. Among the fathers, 2 (3.3%) had only completed primary school, 38 (63.3%) had completed secondary school, and 20 (33.3%) had finished university or postgraduate studies.

## Procedure

Prior to conducting the study, permission was obtained from the institution's ethical board and from each school included, and informed consent was obtained from all of the participants.

The students were approached at the school premises, where they completed the prepared questionnaires including the *Perceived Academic Control Scale* (Perry et al., 2001), the *Achievement Goals Scale* (Rovan, 2011) and the *Perception of Parental Involvement Scale* (which was developed for the purpose of the present study). The students also reported their gender, grade and academic achievement (grade point average; GPA). The students' average self-reported GPA was 3.98 ( $SD = .73$ ).

In addition to completing the prepared questionnaires themselves, the students were also asked to inform their parents about the study. After presenting parents with the relevant study information, those who agreed to participate in the study completed the *Parental Self-Efficacy for Helping the Child Succeed in School Scale* (Hoover-Dempsey et al., 1992; Walker et al., 2005), either on the school premises or at home. They also reported their gender and education status.

## Instruments

The *Perceived Academic Control Scale* (Perry et al., 2001) is an instrument designed to measure students' perceived academic control, that is, their beliefs regarding their capacity to influence their own academic outcomes. The scale comprises 8 items, which the participants rated on a 5-point Likert type scale (1 – strongly disagree; 5 – strongly agree).

The *Achievement Goals Scale* (Rovan, 2011) is an instrument for assessing students' achievement goals. It includes five subscales designed to measure five achievement goals: Mastery Approach, Mastery Avoidance, Performance Approach, Performance Avoidance and Work Avoidance. This scale comprises 15 items, with each achievement goal being measured using 3 items. The

participants' task was to rate their agreement with each item using a 5-point Likert type scale (1 – strongly disagree; 5 – strongly agree).

The *Perception of Parental Involvement Scale* was developed for the purpose of the present study and was used to assess children's perception of parental involvement in their school activities. Three of its items were adapted from the *Parent Report of Home-Based Involvement Activities Scale* and the *Parent Report of School-Based Involvement Activities Scale* (Walker et al., 2005), instruments designed to assess different types of involvement activities of family members with respect to children's schoolwork, which can take place either at home or at school. In addition, four new items were added regarding parents' familiarity with their children's school activities, friends and problems. Overall, this scale comprised 7 items and the participants' task was to rate their agreement with each item using a 4-point Likert type scale (1 – strongly disagree; 4 – strongly agree).

The *Parental Self-Efficacy for Helping the Child Succeed in School Scale* (Hoover-Dempsey et al., 1992; Walker et al., 2005) is an instrument used for assessing parents' perception of their own efficacy in helping their children successfully accomplish school obligations. It comprises 7 items and the participants' task was to rate their agreement with each item using a 4-point Likert type scale (1 – strongly disagree; 4 – strongly agree). Due to unsatisfactory factor loading, one item was eliminated from the analysis and the participants' score was calculated based on the remaining 6 items.

The scores on all of the instruments were calculated as a sum of all of the items in the respective scales. The demographic data and psychometric properties of all of the instruments are listed in Table 1.

**Table 1**

*Psychometric Properties of the Administered Instruments*

Measure	M	SD	Min	Max	Cronbach $\alpha$
Perceived academic control	31.93	5.69	11	40	.73
Mastery approach goal	12.42	2.79	3	15	.79
Mastery avoidance goal	8.73	3.18	3	15	.65
Performance approach goal	8.74	3.46	3	15	.73
Performance avoidance goal	7.92	3.84	3	15	.84
Work avoidance goal	7.29	3.16	3	15	.63
Perception of parental involvement	22.96	3.63	7	28	.69
Parental self-efficacy	19.19	3.39	9	24	.75

## Statistical analysis

The analysis of quantitative data was conducted using the Statistica 11 (StatSoft, Inc.) statistical package. After the basic descriptive and reliability analyses, hierarchical regression analyses were conducted in order to investigate the relative contributions of parental self-efficacy, students' perception of parental involvement and participants' demographic characteristics to students' GPA, perceived academic control and achievement goals. This analysis was chosen because it provides an estimation of the individual predictor variables' unique contribution to the criterion by testing the significance of the change in the explained variance at each regression step (Cohen & Cohen, 1975). Specifically, seven different analyses were conducted using students' GPA, perceived academic control and five different achievement goals as criteria. Prior to conducting the analyses, we tested whether our data meets the relevant requirements and found that no significant issues emerged (e.g., the number of participants with respect to the number of predictor variables was satisfactory, scatter plots showed no major disruption regarding linearity, normality or homoscedasticity, the variables did not indicate multi-collinearity or singularity, and the errors were independent). The participants' demographic characteristics – students' gender and grade, as well as parents' education status – were then entered in all of the analyses in the first step as control variables, which are customarily entered at the start of hierarchical regression analyses. Next, the students' perception of parental involvement was entered in the second step, and parental self-efficacy was entered in the final, third step of the analysis. We wanted to enter two types of beliefs in two separate regression steps because these represent the beliefs of two separate participant groups and consequently do not have the same causal priority (Petrocelli, 2019): the children's views have a more direct impact on their behaviours than the views of their parents and were therefore entered first.

## Results

The results obtained in the hierarchical regression analyses revealed parental self-efficacy, mothers' education status and students' gender as significant predictors of students' academic achievement, together explaining 27% of criterion variance (Table 2). Specifically, higher academic achievement was identified among girls, as well as among children with better-educated mothers and parents characterised by higher parental self-efficacy. Furthermore, students' more positive perception of parental involvement in their school life and higher parental self-efficacy were revealed as significant predictors of perceived

academic control (Table 2). These explained a smaller degree of variance (17%) than academic achievement.

**Table 2**

*Results of the Hierarchical Regression Analyses using Academic Achievement and Perceived Academic Control as Criteria*

Step	Predictors	Criteria	
		Academic achievement	Perceived academic control
1.	Student's gender	.27**	.13*
	Student's grade	.03	-.04
	Father's education status	.10	.06
	Mother's education status	.29**	.08
	R	.43	.19
	R <sup>2</sup>	.19	.04
	F (df)	16.23** (4,280)	2.63* (4,280)
2.	Student's gender	.26**	.09
	Student's grade	.03	-.04
	Father's education status	.10	.05
	Mother's education status	.29**	.08
	Perception of parental involvement	.06	.31**
	R	.44	.36
	R <sup>2</sup>	.19	.13
	Δ R <sup>2</sup>	.00	.09**
F (df)	13.20** (5, 279)	8.29** (5, 279)	
3.	Student's gender	.23**	.07
	Student's grade	.03	-.05
	Father's education status	.12	.07
	Mother's education status	.23**	.03
	Perception of parental involvement	.00	.27**
	Parental self-efficacy	.30**	.21**
	R	.52	.41
	R <sup>2</sup>	.27	.17
	Δ R <sup>2</sup>	.08**	.04**
F (df)	17.44** (6, 278)	9.48** (6, 278)	

*Note.* \* $p < .05$ ; \*\* $p < .01$ ;  $\beta$  - standardised regression coefficient; R - multiple correlation coefficient; R<sup>2</sup> - variance explained by the predictors; Δ R<sup>2</sup> - change in variance explained by the predictors; F - F-ratio; p - level of significance.

With respect to achievement goals, whereas parental self-efficacy was identified as a significant predictor of all avoidance goals, perception of parental involvement was revealed as a significant predictor of students' mastery approach and work avoidance goals (Table 3). Specifically, lower parental

self-efficacy was associated with higher levels of avoidance goals, whereas a more positive perception of parental involvement was associated with a more pronounced mastery approach and less pronounced work avoidance goals. Furthermore, gender was identified as a significant predictor of students' performance approach goals, with girls having lower levels of these goals, and grade was identified as a predictor of students' work avoidance goals, with these goals being more prominent among older students. The identified predictors explained the highest amount of variance of mastery approach and work avoidance goals (14%), followed by performance approach goals (11%). The degree of explained variance for mastery and performance avoidance goals was very modest, amounting to only 5%.

**Table 3**

*Results of the Hierarchical Regression Analyses using Achievement Goals as Criteria*

Steps	Predictors	Criteria				
		Mastery approach	Mastery avoidance	Perform. approach	Perform. avoidance	Work avoidance
1.	Student's gender	.11	-.07	-.31**	-.08	-.13*
	Student's grade	-.07	-.01	-.01	-.10	.18**
	Father's education status	.10	.04	.12	.06	-.08
	Mother's education status	-.10	-.12	-.09	-.13	-.03
	R	.17	.12	.33	.16	.26
	R <sup>2</sup>	.03	.02	.11	.03	.07
	F (df)	2.11 (4,280)	1.06 (4,280)	8.26** (4,280)	1.80 (4,280)	5.18** (4,280)
2.	Student's gender	.07	-.06	-.32**	-.08	-.10
	Student's grade	-.08	-.01	-.01	-.10	.18**
	Father's education status	.09	.04	.12	.06	-.08
	Mother's education status	-.10	-.12	-.09	-.13	-.02
	Perception of parental involvement	.33**	-.02	.05	.02	-.22**
	R	.37	.12	.33	.16	.34
	R <sup>2</sup>	.14	.02	.11	.03	.12
	Δ R <sup>2</sup>	.11**	.00	.00	.00	.05**
	F (df)	8.75** (5, 279)	.86 (5, 279)	6.79** (5, 279)	1.45 (5, 279)	7.34** (5, 279)

Steps	Predictors	Criteria				
		Mastery approach	Mastery avoidance	Perform. approach	Perform. avoidance	Work avoidance
3.	Student's gender	.06	-.04	-.32**	-.06	-.09
	Student's grade	-.08	.00	-.01	-.10	.19**
	Father's education status	.09	.03	.12	.05	-.09
	Mother's education status	-.11	-.08	-.08	-.10	.01
	Perception of parental involvement	.32**	.02	.06	.04	-.19**
	Parental self-efficacy	.03	-.20**	-.02	-.16*	-.16**
	R	.37	.23	.33	.22	.37
	R <sup>2</sup>	.14	.05	.11	.05	.14
	Δ R <sup>2</sup>	.00	.04**	.00	.02*	.02**
	F (df)	7.31** (6, 278)	2.50* (6, 278)	5.66** (6, 278)	2.33* (6, 278)	7.52** (6, 278)

Note. \* $p < .05$ ; \*\* $p < .01$ ;  $\beta$  – standardised regression coefficient; R – multiple correlation coefficient; R<sup>2</sup> – variance explained by the predictors;  $\Delta R^2$  – change in variance explained by the predictors; F – F-ratio; p – level of significance.

## Discussion

The present study investigated the relevance of parental self-efficacy and students' perception of parental involvement to several educational outcomes, including students' GPA, perceived academic control and achievement goals, among a group of primary school students in Croatia. The obtained results indicated parental self-efficacy as a significant predictor of children's GPA, perceived academic control and the three assessed avoidance goals. Furthermore, students' perception of parental involvement was revealed as a significant predictor of their perceived academic control, mastery approach and work avoidance goals. With respect to students' demographic variables included in the analysis, gender was identified as a significant predictor of their GPA and performance approach goals, and grade was identified as a predictor of work avoidance goals. Furthermore, mothers' education status was identified as a significant predictor of students' GPA.

### The differential impact of parental self-efficacy on students' various educational outcomes

Within the present study, the main focus was on parental self-efficacy, which reflects parents' view of their ability to influence children's school achievement and other relevant outcomes (Bandura, 1977; Bugental et al., 1989;

Coleman & Karraker, 2000; Hoover-Dempsey et al., 1992; Hoover-Dempsey & Sandler, 1995, 1997). The relevance of this factor was explored because previous studies had yielded inconsistent results regarding its role in the present context (Anderson & Minke, 2007; Deslandes & Bertrand, 2005; Reed et al., 2000). In accordance with the postulated hypothesis, the obtained results indicated that parental self-efficacy predicted children's GPA, perceived academic control and the three assessed avoidance goals. This general finding agrees with previous results indicating associations between parental self-efficacy, parental involvement in children's school life, and children's educational outcomes (Grolnick et al., 1997; Seefeldt et al., 1998; Shumow & Lomax, 2002). Such associations are understandable, as self-efficacy in general has been associated with successful goal accomplishment and persistence in the face of challenges (Bandura, 2006). In the parenting domain, this indicates that parents' beliefs regarding their efficacy in providing children with the needed help influences not only their own behaviours (Hoover-Dempsey et al., 2005), but also their children's outcomes. Furthermore, it confirms previous findings indicating close associations between parents' beliefs and behaviours, on the one hand, and children's life outcomes, on the other (Murphey, 1992; Sigel et al., 2014).

It is important to note that parental self-efficacy did not influence all of the explored outcomes in the same manner: although it had a positive influence on GPA and perceived academic control, it did not affect students' mastery approach and performance approach goals. Lower parental self-efficacy was, however, associated with more pronounced mastery avoidance, performance avoidance and work avoidance goals. This relevance of parental self-efficacy may be related to the fact that parents with stronger self-efficacy tend to support children's interests in school as well as encouraging the development of their self-management skills (Bandura et al., 1996). Such parents also show more confidence in their children's ability to succeed (Wentzel, 1998), which influences children's views of their own abilities and their chances of success, as reflected in higher perceived academic control and school success. Thus, parents' behaviours and attitudes become reflected in students' own views of themselves, and may even be assimilated through involuntary modelling, given that children learn in part by observing others, especially parents (Bandura, 1997; Schunk, 1989).

In addition, parents' views of themselves are also reflected in students' achievement goals, especially in their mastery avoidance, performance avoidance and work avoidance goals. This indicates that low levels of parental self-efficacy may provide a model for children who not only develop lower academic self-efficacy, but also acquire achievement goals that are motivated by the

fear of failure and associated with the use of self-regulatory strategies aimed at avoiding negative outcomes (Bandura, 1997; Elliot & McGregor, 2001; Elliot & Sheldon, 1997). Sadly, such avoidance regulation is associated not only with lower academic achievement, but also with detrimental personal adjustment and wellbeing (Elliot & Sheldon, 1997).

### **The relevance of students' perception of parental involvement to educational outcomes**

Within the present study, we next considered the relevance of students' perception of parental involvement to their educational outcomes. The obtained results indicated that this factor predicted students' perceived academic control, mastery approach and work avoidance goals. Generally, the relevance of students' perception of parents' involvement to their educational outcomes was expected, and is in accordance with previous findings indicating the relevance of such perceptions to students' perceived academic competence, motivation and efforts (Dornbusch et al., 1987; Gonzalez-DeHass et al., 2005; Grolnick et al., 1991; Grolnick & Slowiaczek, 1994; Marchant et al., 2001; Wilder, 2014). Thus, children who view their parents as more caring and involved, at least in the context of their school involvement, also view themselves as academically more able and are inclined to pursue mastery goals associated with more efficient learning strategies, deeper information processing and higher self-regulation during learning (Anderman & Wolters, 2006; Elliot & McGregor, 2001; Greene et al., 2004). On the other hand, the results of the present study indicating an association between a more negative perception of parental involvement and work avoidance goals extend previous findings. Specifically, they demonstrate that perceiving parents as not involved in one's school life, and potentially not caring about one's education, leads children to engage in behaviours that demonstrate their general lack of interest and engagement in learning activities.

### **Confirmed relevance of demographic variables to students' educational outcomes**

Although the focus of the present study was on parents' and students' views of their own activities, we also aimed to control for and further explore the relevance of several demographic factors in this context. First, with respect to parental characteristics, mothers' education status was identified as a significant predictor of students' GPA, which is in accordance with findings indicating that better-educated parents tend to value education more, collaborate more with the

school and provide their children with better opportunities for pursuing higher education when compared to less-educated parents (Alexander et al., 1994; Davis-Kean, 2005; Hoff, 2003; Noack, 2004). This is especially relevant to mothers, who generally tend to participate in their children's education more than fathers (Cone et al., 1985; Grolnick et al., 1997; Grolnick & Slowiaczek, 1994). Consequently, the identified relevance of mothers' education status within the present study was not surprising, as it confirms some previous findings (Dearing et al., 2004; Magnuson, 2007).

With respect to the students' demographic variables considered within the study, gender was identified as a significant predictor of students' GPA and performance approach goals, and grade was identified as a predictor of work avoidance goals. The reported relevance of students' gender is in accordance with previous studies indicating its associations with academic achievement (Baharudin & Zulkefly, 2009; Bodill & Roberts, 2013; Pomerantz et al., 2002). Specifically, it has been demonstrated that girls tend to show better school achievement measured using school grades, which is in agreement with the findings of the present study. With respect to achievement goals, previous studies have indicated that boys often show more pronounced performance goal orientations than girls (Anderman & Anderman, 1999; Midgley & Urdan, 1995; Patrick et al., 1999), a finding that resonates with the results of the present study.

Although previous studies have indicated the influence of age on academic behaviours, including, for instance, decreased motivation among older students (Eccles, 1993; Eccles et al., 1989), within the present context a substantial contribution from children's attended grade to educational outcomes was not expected, as all of the students were of very similar age. However, the revealed relevance of this factor to students' work avoidance goals may be associated with the specific status of the eighth grade in Croatia, representing the final grade of primary school before the transition to secondary school. Consequently, students may display less typical learning behaviours at this time and focus more on their preparation for secondary school. As this represents a very specific and potentially stressful period for students (Akos & Galassi, 2004; Blyth et al., 1983; Hirsch & Rapkin, 1987; Wigfield et al., 1991), it is not surprising that they may be less committed to schoolwork during this time.

### **Limitations of the present study and directions for future research**

The present study aimed to explore differential effects of parents' and students' views of parental involvement in several learning outcomes. In doing

so, it demonstrated that both factors influenced the investigated outcomes, albeit in different ways. In addition, it replicated some previous findings and reports, primarily those related to the general relevance of individuals' beliefs on educational outcomes and the role of gender and parents' education status in learning success. When interpreting the results from the present study, it is important to consider several limitations that may influence the generalisability of the obtained findings. First, some of the instruments utilised in the present study were associated with limited reliability and need to be complemented by additional measures of addressed constructs in future studies. Next, the present investigation represents a correlational study based on self-report data that do not provide clear insights into the potential causal relationships between variables and may be burdened with a number of additional biases (McDonald, 2008; Paulhus & Vazire, 2007). In addition, the study was conducted on primary students, who typically get the greatest amount of parental help with schoolwork in Croatia. This suggests that the obtained findings should be generalised to other student groups with caution, as parental support, although present across all student ages, tends to change in nature among older students (Boonk et al., 2018).

Given these limitations, in future studies it will be important to study differential effects of parental involvement on girls and boys, as well as their relevance to different student groups, as previous studies have indicated an important role of age and gender with respect to students' academic achievement and other outcomes (Eccles et al., 1993; Jokić & Ristić Dedić, 2010; Midgley & Urdan, 1995; Wigfield & Eccles, 2000). Next, it will be important to validate the cross-cultural stability of the described results by focusing on children from different education systems. Furthermore, it will be important to complement subjective self-ratings with more objective measures of parental involvement and to implement longitudinal research designs that may provide deeper insights into the explored issues. Moreover, future studies should expand the obtained results by relating them to other factors, e.g., specific types of parental behaviours, for different educational outcomes. In doing so, it will be possible to address many related questions regarding the mechanisms underlying the influence of parental involvement on their children's educational outcomes.

## **Conclusions**

The present study investigated the relevance of parental self-efficacy and children's perception of parental involvement for a set of primary school students' learning outcomes, including their academic achievement (GPA),

perceived academic control and achievement goals. The obtained results indicated an important impact of parental self-efficacy on students' educational outcomes, albeit different with respect to specific explored outcomes. Furthermore, students' perception of parental involvement was identified as a significant predictor of perceived academic control and two types of achievement goals. Finally, the previously identified relevance of students' gender, grade and mothers' education status in this context was also confirmed. Overall, these findings confirm and extend previous results regarding the role of parents' engagement in primary school children's educational outcomes by indicating the differential contributions of the explored predictors to various educational outcomes.

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