


REVIEW ARTICLE

# 1 School adjustment, engagement and academic 2 self-concept: family, child, and school factors

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## 9 Abstract

10 Previous research has supported the importance of the interaction between family and school contexts  
11 for student adjustment to school. This study aimed to investigate the mediating role of school engagement  
12 and academic self-concept in relation to family adaptability/cohesion, social acceptability and school  
13 adjustment. A sample of 268 5th- and 6th-grade students aged 11–13 years (131 males, 137 females) from  
14 elementary schools in Iran participated in this study. Results showed that school adjustment was positively  
15 related to family adaptability/cohesion, social acceptability, school engagement, and academic self-concept.  
16 Family adaptability/cohesion and social acceptability also positively correlated with school engagement  
17 and academic self-concept. In addition, the data provided a good fit for the hypothesised model of the  
18 mediating role of school engagement and academic self-concept in relation to family adaptability/cohesion,  
19 social acceptability, and school adjustment. The results showed that coherent and adaptable family systems  
20 and high social acceptability of students can affect school adjustment both directly and indirectly through  
21 school engagement and academic self-concept.

22 **Keywords:** family adaptability; family cohesion; social acceptability; school engagement; academic self-concept; school  
23 adjustment

24  
25 Most educators and education specialists have emphasised the important role of successful school  
26 adjustment in the academic achievement and subsequent learning of children (Early, Pianta, Taylor, &  
27 Cox, 2001; Rimm-Kaufman & Pianta, 2000). School adjustment is a multidimensional construct (Ratelle,  
28 Duchesne, & Guay, 2017) that encompasses both academic achievement and school engagement and  
29 generally refers to the extent to which a child complies with school regulations and procedures, and  
30 interacts appropriately with peers and teachers, without being overwhelmed by stress. The academic  
31 dimension of school adjustment is associated with the way students handle the assigned homework  
32 and class activities, and their performance in exams. The social dimension includes involvement with  
33 social activities in school, such as cooperating with classmates and showing a respectful attitude to peers  
34 and teachers. The personal-emotional aspect of school adjustment pertains to the way students cope with  
35 pressure and stress (Ratelle et al., 2017).

## 36 **Family cohesion, family adaptability, and school adjustment**

37 Understanding the adjustment of children in school entails the consideration of various intrinsic,  
38 social, and family- and school-related factors. According to the circumplex model of family functioning

(Olson, Sprenkle, & Russell, 1989), neither high nor low, but moderate levels of adaptability and cohesion among family members nurtures optimal family functioning. Adaptability is defined as the extent to which the family system is flexible. It refers to the ability of family members to change the power structure, role relationships, and relationship rules in the family as and when situational and developmental demands arise (Slicker, 1997). Feldman (2008) showed that while higher levels of adaptability were associated with enhanced academic performance, they were also associated with behaviour conduct problems in both child bullies and victims. Consistent with these findings, Wang and Fletcher (2015) assert that parental acceptance serves to facilitate higher levels of psychosocial competence, while behavioural control is negatively associated with problem behaviours in children. In the context of adaptability, Heidari, Fallahi, and Hajiloo (2018) concluded that school adjustment is predicted positively by authoritative parenting style and secure attachment style, and negatively by insecure attachment style. Similarly, children's perception of academic autonomy support from their parents has been reported to have significant direct positive effects on their academic achievement, self-esteem and academic motivation, and indirect effects on their academic motivation mediated by self-esteem, while direct negative effects on self-esteem and academic achievement were observed for children's perception of parental academic planning control (Jiang, Yau, Bonner, & Chiang, 2017).

Within the framework of the circumplex model of family functioning, family cohesion, defined as the emotional bonding that family members have toward one another (Olson et al., 1989) and as the ability of the family members to cooperate, communicate and solve problems (Cuffe, McKeown, Addy, & Garrison, 2005), has also been associated with positive outcomes in children. Youth from cohesive families respond adaptively to social challenges and manage negative emotions effectively (Morris, Silk, Steinberg, Myers, & Robinson, 2007), while those from less cohesive families experience high levels of emotional distress and emotion dysregulation (Carthy, Horesh, Apter, & Gross, 2010). The shared affection, support, commitment and helpfulness that members in cohesive families exhibit towards each other (Barber & Buehler, 1996) is predictive of social problem-solving skills and social self-efficacy in children (Leidy, Guerra, & Toro, 2010), lower levels of alcohol-related problems in adolescence (Reeb et al., 2015), and healthy lifestyles in female college students (An & Western, 2019). The strong emotional bonds measured by family cohesion promote family support and are inversely related to depression (Guassi Moreira, & Telzer, 2015) and suicide ideation (Joel Wong, Uhm, & Li, 2012), indices of mental health that can impact school adjustment (Finning et al., 2019). In an investigation of the role of family cohesion in school adjustment, Qin, Wan, Qu, and Chen, (2015) found that family cohesion can predict school belonging positively both directly and indirectly through interpersonal security and achievement goals, suggesting the importance of family cohesion to school adjustment. Similarly, Rezaei-Dehaghani, Keshvari, and Paki, (2018) found family expressiveness, socialisation and cohesion to be reliable predictors of academic achievement.

#### 74 **Social acceptability and school adjustment**

75 Social acceptability is generally defined as an indicator of likability or receiving positive regard from peers  
 76 (Coie & Dodge, 1983). According to the ecological model for child development (Bronfenbrenner, 2005),  
 77 at the microsystem level, children's relationships with their peers also have a direct impact on school  
 78 adjustment, underscoring the importance of social skills that facilitate the establishment of optimal  
 79 relationships with peers (Selen & Tunçay, 2019). Socially accepted students are described as friendly,  
 80 responsible and socially skilled individuals. Children with such behavioural styles tend to experience  
 81 enhanced academic development as they share learning resources more with their peers, have a higher  
 82 sense of belonging and show greater engagement at school (Guo, Zhou, & Feng, 2018; Llorca, Richaud, &  
 83 Malonda, 2017). A lack of the sense of relatedness to and acceptance by peers hampers students' cognitive  
 84 engagement with the classroom (Furrer & Skinner, 2003) and contributes to lower levels of academic  
 85 achievement in both the early (Zhang, Eggum-Wilkens, Eisenberg, & Spinrad, 2017) and later school  
 86 years (Gallardo, Barrasa, & Guevara-Viejo, 2016; Tetzner, Becker, & Maaz, 2016). Two explanations  
 87 (Vandenbroucke, Spilt, Verschueren, & Baeyens, 2018) for this association between peer acceptance

88 and academic performance are possible. It is likely that negative experiences with peers can cause stress,  
89 which in turn is associated with impaired functioning of prefrontal brain regions, thereby exerting a  
90 negative impact on executive functioning and working memory. Alternatively, it is plausible that  
91 when stressed due to peer rejection, children attempt to restore the relationship, which utilises cognitive  
92 resources that precludes their investment in other cognitive tasks.

### 93 **The role of school engagement**

94 A construct relevant to positive psychology, school engagement is a major factor contributing to school  
95 adjustment (Gutiérrez, Tomás, Romero, & Barrica, 2017). School engagement has been defined as the  
96 extent to which students are committed to and involved in the curriculum, school and social activities  
97 (Tilbury Creed, Buys, Osmond, & Crawford, 2014). School engagement is conceived of as a multidimensional  
98 construct with emotional, behavioural and cognitive components influenced by contextual  
99 and relational factors, such as relationships with peers, teachers and family members, and is predictive  
100 of a wide range of academic trajectories and outcomes, including school dropout (Miranda-Zapata,  
101 Lara, Navarro, Saracostti, & de-Toro, 2018). Emotional engagement refers to the student's level of  
102 emotional response or emotional bond to the school, school-related activities, teachers and classmates.  
103 Emotional engagement motivates students to engage and persevere in school work, and is indicated  
104 by a student's feelings about learning, positive attitude, interest and intrinsic motivation (Moreira,  
105 Dias, Matias, Castro, Gaspar, & Oliveira, 2018). Behavioural engagement refers to students' interactions  
106 and responses in academic, social or extracurricular activities in school, and is indicated by  
107 class attendance, absence of disruptive behaviour, effort and persistence with schoolwork, finishing  
108 set tasks, mean overall grades and participation in extracurricular activities (Zhu, Tian, Zhou, &  
109 Huebner, 2019). Cognitive engagement includes students' perceptions and beliefs about themselves,  
110 their school, their teachers and their fellow students, self-concepts, future aspirations and expectancies  
111 (Moreira et al., 2018).

112 Students' engagement with school has been linked to various aspects of student development such as  
113 school integration, school satisfaction or academic achievement (Serrano & Andreu, 2016). On the  
114 other hand, low school engagement has been reported to be associated with or resulting in socially  
115 undesirable behaviours, risk behaviours, grade retention, diminished mental health, school dropout  
116 and/or low academic performance (Gutiérrez et al., 2017; Quin, Heerde, & Toumbourou, 2018). A  
117 substantial body of research has been conducted on school engagement and its correlates. Recent  
118 research has shown that moderate behavioural engagement is associated with higher achievement  
119 in science (Bae & Debusk-Lane, 2019). Student engagement and academic performance bear a reciprocal  
120 relationship with bidirectional predictability (Moreira et al., 2018). Similarly, students' behavioural  
121 engagement with school and their subjective wellbeing (Zhu et al., 2019), and their intentional  
122 self-regulation and engagement (Stefansson, Gestsdottir, Birgisdottir, & Lerner, 2018), are reported  
123 to be reciprocally predictive over time, mutually reinforcing each other. Furthermore, supportive  
124 school environments have been found to buffer the negative effect of poor academic performance  
125 on cognitive engagement (Moreira et al., 2018).

126 Attempts have also been made to predict engagement, and various factors such as prior engagement,  
127 academic grades, family, peer and teacher support have been found to make unique contributions to  
128 various indicators of engagement (Fernández-Zabala, Goñi, Camino, & Zulaika, 2016; Quin et al.,  
129 2018). In a study by Krauss, Kornbluh, and Zeldin (2017), attending after-school co-curricular and  
130 community-based youth programs, and family processes such as parental monitoring and family  
131 cohesion emerged as predictors of cognitive and emotional school engagement. Some studies have  
132 focused on the mediating or moderating effects of school engagement. Gutierrez et al. (2017) found  
133 that school engagement mediates the effect of perceived support from friends, peers and teachers  
134 on satisfaction with school, and Miranda-Zapata et al. (2018) claimed that cognitive engagement  
135 and affective engagement moderated the effect of contextual variables on school performance and  
136 attendance at classes respectively.

137 **The role of academic self-concept**

138 Academic self-concept, generally conceptualised as an offshoot of global self-concept (Kadir & Yeung,  
139 2016), refers to the self-perception of a student's academic ability in a specific school subject such as  
140 math, science or language (Marsh & Craven, 2006). This estimation of academic ability is based on a  
141 comparison of the student's standing with respect to the average academic ability of peers, or on the  
142 value accorded by society to the entire school. Empirical research on academic self-concept over the last  
143 several decades has demonstrated that a student's self-perception of academic competence is an impor-  
144 tant precursor of the student's educational aspirations (Guo, Marsh, Parker, Morin, & Yeung, 2015),  
145 educational decisions (Aar, Peters, Crujisen, & Crone, 2019), mastery and performance approach goals  
146 (Maltais, Duchesne, Ratelle, & Feng, 2017), academic adjustment (Nasiri, Micaelimane, & Issazadegan  
147 2017), and scholastic achievement (S. Chen, Yeh, Hwang, & Lin, 2013; Han, 2019; Lösch et al., 2017).  
148 Some researchers have investigated factors that impact on academic self-concept. It has been found that  
149 when academic self-concept is high, previous academic efforts and grades have positive effects on  
150 subsequent academic self-concept (Marsh et al., 2016). In addition, short-term self-enhancement through  
151 over-reporting of grades (Sticca, Goetz, Nett, Hubbard, & Haag, 2017), downward comparison of a  
152 student's own achievement with that of peers, and with the student's prior achievements and with  
153 achievement in other areas (Wolff, Helm, Zimmermann, Nagy, & Möller, 2018) tended to increase aca-  
154 demic self-concept. Students' self-perceived competence has also been shown to have indirect relations  
155 with the range of educational outcomes, even after controlling for factors such as the previous achieve-  
156 ment histories (K. Liu, Cheng, Chen, & Wu, 2009; Wouters, Germeijs, Hilde, & Verschueren, 2011).

157 An individual's academic self-concept typically works in a reciprocal relationship with achievement,  
158 with academic self-concept and achievement being both a cause and an effect of each other (Han, 2019;  
159 Marsh & Craven, 2006; Marsh & O'Mara, 2008; Niepel, Brunner, & Preckel, 2014; Preckel, Niepel,  
160 Schneider, & Brunner, 2013). The role of academic self-concept as a mediator in relation to certain  
161 cognitive variables and academic achievement has also been identified. Academic self-concept has been  
162 reported as mediating the relation between academic attitudes and academic achievement (Veas,  
163 Castejón, Miñano, & Gilar-Corbí, 2019), between parent-child discrepancies in educational aspiration  
164 and child academic achievement (Lv et al., 2018), and between students' level of perceived challenge  
165 (being over- or underchallenged) and their career aspirations (Krannich et al., 2019).

166 Contextual parameters associated with children's academic self-concept have also been studied.  
167 Self-perceived scholastic competencies were predicted by classroom organisation, rule clarity and student  
168 involvement (Kokkinos & Hatzinikolaou, 2011). According to Bronfenbrenner's (1986) ecological  
169 systems theory, academic achievement is dependent on a complex interaction involving the child, their  
170 families and the wider sociocultural context. Regarding the relevance of parent-child relationships to  
171 academic success, Lowe and Dotterer (2013) stressed the importance of sustained parental monitoring  
172 of adolescents in the academic outcomes of children. Furthermore, adolescents are reported to experience  
173 higher academic self-concept when they perceive maternal psychological control as providing satisfaction  
174 for the adolescent's needs for autonomy, relatedness and competence (Lu, Walsh, White, & Shield, 2017).  
175 Sahil and Hashim (2011) concluded that parents' social support for children affects their levels of school  
176 engagement through the mediating role of academic self-concept. In a recent study, teachers' higher  
177 expectations were associated with higher academic self-concept in students, which in turn predicted their  
178 higher achievement (Szumski & Karwowski, 2019). K. Chen, Chang, and Hsueh (2018) indicated that  
179 academic self-concept and learning engagement positively mediated the relationship between social  
180 context and academic achievement. Also, higher academic self-concept has been reported to be directly  
181 associated with lower test anxiety and higher intrinsic motivation, both of which impact achievement  
182 (Khalaila, 2015). Domain-specific academic self-concepts were also found to mediate the relations  
183 between achievement and test anxiety (Arens, Becker, & Möller, 2017), and academic self-concept  
184 was found to mediate the relations between academic attitudes toward teachers and school and academic  
185 achievement (Veas et al., 2019).

186 The role of academic self-concept as a potential mediator between family adaptability/cohesion  
187 and school-related consequences, including school engagement, school adjustment and academic  
188 achievement, have yet to be examined. Given that various dimensions of parental involvement  
189 (e.g., exchange of factual and emotional information between parents and their children, parent-child  
190 discussions and parent-child communication) have been reported to be associated with the academic  
191 and emotional functioning of children (Lv, Lv, Yan, & Luo, 2019), and that child-perceived parental  
192 support has been found to be related to task-persistent behaviour, a motivational aspect of academic  
193 achievement (Silinskas & Kikas, 2019), as well as that higher educational qualifications and socioeco-  
194 nomic level of parents have also been found to impact the cognitive performance and academic  
195 achievement of children (Alves, Gomes, Martins, & Almeida, 2017), it is plausible that a home  
196 environment characterised by the degree of family adaptability/cohesion will affect the academic  
197 self-concept of children and indirectly impact on their emotional functioning in school.

### 198 **The present study**

199 The literature reviewed indicates that school adjustment is influenced by a network of family-related,  
200 peer-related and child-related variables. In addition, school adjustment is influenced by school-related  
201 factors such as academic self-concept and school engagement. Findings from empirical studies suggest  
202 that family-related variables play a decisive role in children's adjustment to school either by directly  
203 influencing children's academic achievement or indirectly by affecting the children's perception of  
204 their academic competencies, which in turn may impact children's engagement with school-related  
205 activities. Engagement is also affected by the child's perceived acceptability by peers. Therefore, the  
206 present study aimed to investigate the mediating role of school engagement and academic self-concept  
207 in the relationship between family adaptability/cohesion and social acceptability with school adjust-  
208 ment. We anticipate that the study will provide valuable information about the interaction of family  
209 and school factors in school adjustment in Iranian students and have practical implications for school  
210 psychologists to increase elementary students' adjustment with school.

## 211 **Method**

### 212 **Participants**

213 Participants included 268 students ( $M_{\text{age}} = 12.05$ ;  $SD = 0.75$  years) enrolled in the 5th and 6th grades  
214 of elementary schools located in Ardabil (northwest of Iran) during the academic year of 2017–2018.  
215 The students were selected through cluster sampling with the school as the sampling unit; 48.88 %  
216 (131) of participants were male and 51.12% (137) were female. Of these, 126 individuals (47%) were  
217 in the 5th grade and 142 individuals (53%) were in the 6th grade. Also, 42 individuals (15.7%) were an  
218 only child; 76 (28.4%) were the first child; 90 (33.6%) were the second child; 40 (14.9%) were the third  
219 child; 18 (6.7%) were the fourth child, and 2 (0.7%) were the fifth (or more) child of their family.

### 220 **Measures**

221 *The school adjustment survey (SAS; Santa Lucia & Gesten, 2000)*

222 This 34-item self-report tool assesses students in terms of motivation, achievement expectations, and  
223 relationships with teachers and peers (Santa Lucia & Gesten, 2000). In this survey, students are asked to  
224 state the degree to which they agree with each of the 33 statements on a 5-point scale ranging from (0)  
225 *strongly disagree* to (4) *strongly agree*. The factor analysis on this scale showed the following five factors:  
226 School Spirit (Cronbach's  $\alpha = .85$ ), Goal-Oriented (Cronbach's  $\alpha = .79$ ), Child-Peer  
227 Relations (Cronbach's  $\alpha = .63$ ), Child-Teacher Relations (Cronbach's  $\alpha = .84$ ), and  
228 Alienation (Cronbach's  $\alpha = .63$ ). In the present study, these coefficients were obtained in the range  
229 of .78 for Alienation to .96 for Child-Peer Relations.

230 *The academic self-concept questionnaire (ASQC; W. Liu & Wang, 2005)*

231 This questionnaire has been designed based on the Academic Self-Esteem subscale (Battle, 1981),  
 232 the School Subjective Self-Concept (Marsh, Relich, & Smith, 1983), and the General and Academic  
 233 Status scales (Piers & Harris, 1964). The ASQC consists of two 10-item subscales: students' academic  
 234 confidence (10 items) and students' academic effort (10 items). The confidence subscale assesses stu-  
 235 dents' feelings and perceptions regarding their academic competence, and the effort subscale assesses  
 236 students' commitment, involvement and interest regarding school assignments. A validation study  
 237 showed a convergent validity between this scale and Battle's Academic Self-Esteem Scale (1981)  
 238 ( $r = .73$ ), Marsh et al.'s (1983) School Subjects Self-Concept Scale ( $r = .71$ ), and Piers and Harris'  
 239 (1964) General and Academic Status scale ( $r = .63$ ). Results of the reliability analysis showed that  
 240 Cronbach's alpha for the total scale was .82, indicating the internal consistency of the items. The  
 241 two subscales also had satisfactory discriminating power (Cronbach's alphas = .71 for students'  
 242 academic confidence and .76 for students' academic effort; W. Liu & Wang, 2005). In Iran, a study  
 243 was conducted with a group of elementary students and the following Cronbach's alpha coefficients  
 244 were obtained for the two subscales and for the total scale: students' confidence (.77), students' effort  
 245 (.83), and the total scale (.91; Basharpour, Issazadegan, Zahed, & Ahmadian, 2010).

246 *School engagement scale (SES; Wang, Willett, & Eccles, 2011)*

247 This test consists of three aspects of behavioural, emotional, and cognitive engagement. Behavioural  
 248 engagement consists of two subscales (Attentiveness and Compliance) and is measured on a 5-point  
 249 Likert scale from 1 (*almost never*) to 5 (*almost always*). Emotional engagement consists of two subscales  
 250 (School Belonging and Valuing School Education) and is measured on a 5-point Likert scale from 1  
 251 (*I completely agree*) to 5 (*I completely disagree*). Cognitive engagement consists of two subscales  
 252 (Self-Regulated Learning and Cognitive Strategy Use) and is measured on a 5-point Likert scale from  
 253 1 (*almost never*) to 5 (*almost always*). Based on the results of the confirmatory factor analysis conducted  
 254 by Wang et al. (2011), the factor loadings of all questions on the six subscales were significant in the  
 255 range of .51 to .89 at the .05 significance level. The reliability coefficients of all subscales were equal  
 256 to/higher than .70 (Attentiveness = .70; Compliance = .78; School Belonging = .75, Valuing of School  
 257 Education = .72; Self-Regulated Learning = .78; and Cognitive Strategy Use = .77).

258 *Social acceptability questionnaire (SAQ)*

259 This self-report questionnaire was designed by Samooei, Bagherzadeh, and Sabzavari (2005) and  
 260 assesses the need for social approval in children. In preschool children, internal consistencies of .48  
 261 and .51 were obtained for girls and boys respectively; however, in elementary school children, internal  
 262 consistencies of .79 and .85 were reported for boys and girls respectively. The test-retest reliability  
 263 obtained after five weeks was reported to be .58. This questionnaire was designed with 17 three-item  
 264 questions which included scores 2 (*yes*), 1 (*somewhat*), and 0 (*no*). The lowest and highest scores of the  
 265 questionnaire are 0 and 38 respectively. Higher scores indicate higher levels of social acceptability and  
 266 vice versa. The internal consistency of this questionnaire (Cronbach's alpha = .77) and split-half  
 267 reliability (.66) were found to be acceptable.

268 *The family adaptability and cohesion evaluation scale II (FACES II; Olson, Russell, & Sprenkle, 1983)*

269 This scale is a 30-item self-report measure assessing family functioning. This instrument consists of two  
 270 scales: adaptability and cohesion. The adaptability scale consists of 14 items that address a family's  
 271 adaptive capacity and flexibility of family members in stressful situations ('In our family, everyone  
 272 shares responsibilities'; Cronbach's alpha = .83). The cohesion scale consists of 16 items that determine  
 273 the degree of emotional bonding and individuality in a family ('Family members feel very close to each  
 274 other'; Cronbach's alpha = .80). Olson et al. (1983) reported internal consistency coefficients of .81 and  
 275 .80 for the subscales of adaptability and cohesion respectively. This indicates the suitable construct

**Table 1.** Descriptive Statistics and Correlations for the Study Variables

|                       | Family cohesion | Family adaptability | Social acceptability | School engagement | Academic self-concept | School adjustment |
|-----------------------|-----------------|---------------------|----------------------|-------------------|-----------------------|-------------------|
| Family cohesion       |                 |                     |                      |                   |                       |                   |
| Family adaptability   | 0.59**          |                     |                      |                   |                       |                   |
| Social acceptability  | 0.31**          | 0.30**              |                      |                   |                       |                   |
| School engagement     | 0.40**          | 0.35**              | 0.42**               |                   |                       |                   |
| Academic self-concept | 0.32**          | 0.26**              | 0.35**               | 0.39**            |                       |                   |
| School adjustment     | 0.67**          | 0.55**              | 0.48**               | 0.56**            | 0.61**                |                   |
| Minimum               | 17              | 21                  | 17                   | 41                | 22                    | 41                |
| Maximum               | 66              | 133                 | 50                   | 120               | 58                    | 129               |
| <i>M</i>              | 48.11           | 48.96               | 37.27                | 77.06             | 40.85                 | 93.76             |
| <i>SD</i>             | 8.89            | 13.51               | 7.55                 | 12.61             | 8.11                  | 12.11             |

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

276 validity of this scale. In the present study, Cronbach's alpha coefficients of .95 and .97 were obtained for  
277 the family cohesion and adaptability subscales respectively.

### 278 **Procedure**

279 First, one district from among the two existing educational districts in Ardabil city was randomly  
280 selected. A list of private and public schools in the identified district was obtained. Then, two girls'  
281 schools and two boys' schools were randomly selected from among the elementary schools in that  
282 district. Next, one 5th-grade classroom and one 6th-grade class was randomly selected in each of  
283 the selected schools. Parental consent and student assent were obtained before the study began.

284 Participating students sat in their normal seats in their own classrooms and individually completed  
285 the self-report measures of school adjustment, academic self-concept, school engagement, social  
286 acceptability, and the family adaptability and cohesion evaluation.

### 287 **Data analysis**

288 Descriptive statistics were used to explain participants' general characteristics, family adaptability/  
289 cohesion, social acceptability, school engagement, academic self-concept and school adjustment. Path  
290 analyses were used to evaluate the difference of linear structural relations for the variables. The maximum  
291 likelihood estimation method was used for path analysis to determine model specification, model esti-  
292 mation, and goodness-of-fit assessment. The collected data were analysed via SPSS<sub>23</sub> and Lisrel 8.7.

### 293 **Results**

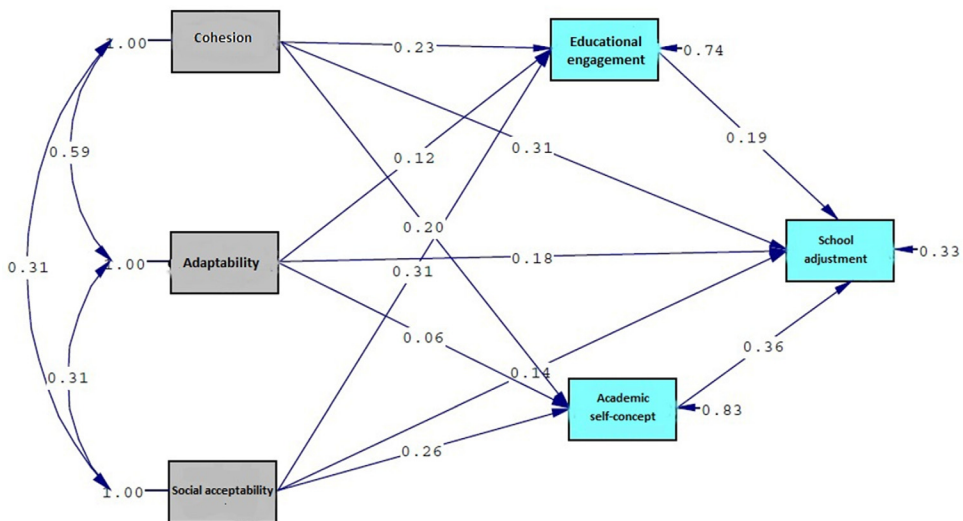
294 Data distribution was examined for normality. All the variables were considered to be normally  
295 distributed as skew indices ranged between  $-2$  and  $2$  and kurtosis was between  $-7$  and  $7$  (West,  
296 Finch, & Curran, 1995).

### 297 **Correlation results**

298 Table 1 shows the means, standard deviations and intercorrelations among family cohesion, family  
299 adaptability, social acceptability, school engagement, academic self-concept and school adjustment.  
300 As described in Table 1, the correlational results show that family cohesion, family adaptability, social

**Table 2.** Fit Statistics for the Hypothesised Model

| Goodness-of-fit statistics  | Value | Acceptable level                   | Fitness status |
|---|-------|------------------------------------|----------------|
| Chi-square  | 13.79 | Value of the chi-square table      | Good fitness   |
| The goodness-of-fit index (GFI)   | 0.98  | 0 (no fitness) to 1 (full fitness) | Good fitness   |
| Adjusted goodness-of-fit index (AGFI)                                   | 0.92  | 0 (no fitness) to 1 (full fitness) | Good fitness   |
| Root mean square error of approximation (RMSEA) and confidence interval | 0.04  | <0.05                              | Good fitness   |
| normed fit index (NFI)  | 0.98  | 0 (no fitness) to 1 (full fitness) | Good fitness   |
| Non-normed fit index (NNFI)   | 0.94  | >0.9                               | Good fitness   |
| Comparative fit index (CFI)   | 0.98  | 0 (no fitness) to 1 (full fitness) | Good fitness   |
| Parsimony normed fit index (PNFI)                                       | 0.66  | 0.50 and greater                   | Good fitness   |

**Figure 1.** The structural coefficients of the conceptual research model.

301 acceptability, school engagement and academic self-concept are positively related to school adjustment.  
 302 Furthermore, family cohesion, family adaptability and social acceptability are positively related to  
 303 school engagement and academic self-concept.

### 304 ***Fitness of path model***

3(AQ5 The fit of the hypothesised model was examined using LISREL (Jöreskog & Sörbom, 2001) and  
 306 goodness of fit indices were obtained. The values for this model were:  $\chi^2(4, \text{minimum } n = 268) = 13.79$   
 3(AQ6 ( $p = .06$ ) with a comparative fit index (CFI) of .98. Steiger's (1990) root mean square error of approxi-  
 308 mation (RMSEA) was .04, indicating that the errors of approximation for fitting the model to the  
 309 population were small and the hypothesised model was a good fit to the data (Browne & Cudeck,  
 310 1993). All indices of fit are displayed in Table 2.

311 In the structural equation model, besides testing the model and evaluating goodness-of-fit indices,  
 312 the estimated structural coefficients must be assessed to test research hypotheses. These estimated  
 313 parameters are presented in Figure 1.



**Table 3.** Estimates of the Coefficients of Direct and Indirect Relations

| Variables Estimates                             | Standardised parameter | The standard error of estimate (SEE) | T    | Result    |
|---|------------------------|--------------------------------------|------|-----------|
| The direct effects of family cohesion on:       |                        |                                      |      |           |
| School engagement                               | 0.33**                 | 0.09                                 | 3.48 | Confirmed |
| Academic self-concept                           | 0.19*                  | 0.06                                 | 2.48 | Confirmed |
| School adjustment                               | 0.41**                 | 0.06                                 | 6.63 | Confirmed |
| The direct effects of family adaptability on:   |                        |                                      |      |           |
| School engagement                               | 0.11                   | 0.06                                 | 1.78 | Rejected  |
| Academic self-concept                           | 0.04                   | 0.04                                 | 0.90 | Rejected  |
| School adjustment                               | 0.16**                 | 0.04                                 | 3.98 | Confirmed |
| The direct effects of social acceptability on:  |                        |                                      |      |           |
| School engagement                               | 0.51**                 | 0.09                                 | 5.46 | Confirmed |
| Academic self-concept                           | 0.28**                 | 0.06                                 | 4.42 | Confirmed |
| School adjustment                               | 0.22**                 | 0.07                                 | 3.42 | Confirmed |
| The indirect effect of family cohesion on:      |                        |                                      |      |           |
| School adjustment                               | 0.16**                 | 0.04                                 | 3.76 | Confirmed |
| The indirect effect of family adaptability on:  |                        |                                      |      |           |
| School adjustment                               | 0.04                   | 0.05                                 | 1.56 | Rejected  |
| The indirect effect of social acceptability on: |                        |                                      |      |           |
| School adjustment                               | 0.24**                 | 0.05                                 | 5.26 | Confirmed |
| The direct effect of school engagement on:      |                        |                                      |      |           |
| School adjustment                               | 0.18**                 | 0.04                                 | 4.55 | Confirmed |
| The direct effect of academic self-concept on:  |                        |                                      |      |           |
| School adjustment                               | 0.53**                 | 0.06                                 | 9.19 | Confirmed |

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

314 The results shown in Table 3 indicate that family cohesion has a direct positive effect on school  
 315 adjustment. It also has an indirect effect through the mediating role of school engagement and aca-  
 316 demic self-concept. Family adaptability has only a direct effect on school adjustment. Social  
 317 acceptability has both direct and indirect effects (through the mediating role of school engagement  
 318 and academic self-concept) on the school adjustment.

319 As described in Table 4, family cohesion, family adaptability and social acceptability affect school  
 320 adjustment both directly and indirectly through the mediating role of school engagement and academic  
 321 self-concept. School engagement and academic self-concept have only direct effects on school  
 322 adjustment ( $p < .05$ ).

## 323 Discussion

324 We aimed to test the model of structural relationships of family adaptability/cohesion and social  
 325 acceptability with school adjustment, considering likely the mediating roles of school engagement  
 326 and academic self-concept. Our results appear to provide support for this model.

**Table 4.** Direct, Indirect, and Total Effects of Family Cohesion/Adaptability, Social Acceptability, School Engagement and Academic Self-Concept on School Adjustment

| Variable              | Effects |          |       |
|-----------------------|---------|----------|-------|
|                       | Direct  | Indirect | Total |
| Family cohesion       | .41     | .16      | .57   |
| Family adaptability   | .16     | .04      | .20   |
| Social acceptability  | .22     | .24      | .46   |
| School engagement     | .18     | –        | .18   |
| Academic self-concept | .53     | –        | .53   |

### 327 ***The direct effect of family cohesion and family adaptability on school adjustment***

328 The direct effect of family adaptability and cohesion on school adjustment found in the present study is  
 329 consistent with the results of studies by Carthy *et al.* (2010), Heidari *et al.* (2018), Jiang *et al.* (2017),  
 330 Morris *et al.* (2007), Qin *et al.* (2015), Rezaei-Dehaghani *et al.* (2018) and Wang and Fletcher (2015),  
 331 who found significant relationships between family cohesion/adaptability and various dimensions of  
 332 school adjustment. Together, these findings confirm that a blend of parental flexibility and control  
 333 through an authoritative parenting style fosters in children a sense of being supported, who then feel  
 334 motivated to strive for academic success and competent to deal effectively with the academic and emo-  
 335 tional challenges at school. Olson and Gorall (2003) used the concepts of togetherness and separateness  
 336 to account for family cohesion and proposed that a functional family differs from a dysfunctional one  
 337 in its ability to balance separateness and togetherness in accordance with the situational needs of the  
 338 family. School adjustment is a multidimensional task that calls for flexibility and adaptability. Students  
 339 who are raised in an efficiently structured family environment acquire the ability to maintain a balance  
 340 between closeness to others and separation from them, which results in better adjustment.

### 341 ***The direct effect of social acceptability on school adjustment***

342 Social acceptability was also observed to have a direct effect on school adjustment, a finding docu-  
 343 mented by several researchers (e.g., Furrer & Skinner, 2003; Guo *et al.*, 2018; Selen & Tuncay,  
 344 2019; Tetzner *et al.*, 2016). Social acceptability indexed by peer acceptance potentially instills a sense  
 345 of relatedness in children and brings about opportunities for emotional and cognitive engagement  
 346 through shared experiences and learning. Students with high levels of social acceptability interact more  
 347 frequently with peers, thereby getting the exposure required for internalising peer group norms and  
 348 refining their communication and cognitive-emotion regulation skills, which in turn contribute to the  
 349 development of prosocial behaviour and better adjustment in school. Children who experience peer  
 350 rejection or exclusion are at risk of developing externalising problems (Reijntjes *et al.*, 2011) and  
 351 academic difficulties, plausibly through decreased working memory performance and executive  
 352 functioning (Vandenbroucke *et al.*, 2018). Overall, peer acceptance plays a very significant role in  
 353 the adjustment of children in school.

### 354 ***The direct effect of school engagement on school adjustment***

355 School engagement had a direct effect on school adjustment, validating findings of previous research  
 356 (Bae & Debusk-Lane, 2019; Gutiérrez *et al.*, 2017; Quin *et al.*, 2018; Serrano & Andreu, 2016).  
 357 Congruent with the self-determination theory (Ryan & Deci, 2000) and stage-environment fit theory  
 358 (Eccles & Midgley 1989), this finding affirms that children's perception that the school context meets  
 359 their psychological needs enhances their academic motivation, influencing their engagement and

360 performance in school. Teacher-student relations reflected by explicit expectations and consistent  
361 responses from teachers facilitate student participation in academic tasks and promote positive iden-  
362 tification with the school (Wang & Peck, 2013). Emotional engagement with school is the emotional  
363 connection a student feels with the school. It is an important component of school adjustment because  
364 students' interest in school and positive attitudes about school are likely to impact their motivation and  
365 appreciation for school-related activities (Ladd & Dinella, 2009). Finally, the cognitive component of  
366 school engagement leads to the cognitive investment of students in learning and the use of self-  
367 regulation strategies for learning. These three components of school engagement can prepare the  
368 ground for school adjustment and provide students with appropriate mental health at school  
369 (Wang & Peck, 2013).

### 370 ***The direct effect of academic self-concept on school adjustment***

371 Our study showed that academic self-concept has a direct effect on school adjustment. Links between  
372 academic self-concept and students' involvement with studying, academic attitudes and academic  
373 achievement have been reported in previous research (Szumski & Karwowski, 2019; Veas et al.,  
374 2019). This implies that a student's academic self-concept may impact their motivation to learn, their  
375 ability to handle academic demands, and ultimately, their adjustment to school.

### 376 ***The mediating role of school engagement and academic self-concept in the relation between*** 377 ***family cohesion and school adjustment***

378 The results of this study showed that the relation between family cohesion and school adjustment as  
379 mediated by school engagement and academic self-concept. This is consistent with the findings of  
380 Calafat, Gracia, Juan, Becona, and Fernandez-Hermida (2014), Krauss et al. (2017), and Leidy et al.  
381 (2010), and related to the interaction between family and educational factors in school adjustment.  
382 Family cohesion can provide a supportive environment for child development, in which the child  
383 learns social interaction skills through imitation and reinforcement. Within a cohesive and supportive  
384 family system, children can learn skills to process and respond to emotional interpersonal events  
385 appropriately. These skills may not only boost an individual's social self-efficacy but also enhance  
386 students' interest in the school environment and increase their desire for learning. Therefore, a coher-  
387 ent family environment, characterised by the intimacy and unity of its members, fosters a sense of  
388 emotional security in children, enabling them to generate effective coping strategies to deal with novel  
389 and challenging interpersonal events in school. Success in navigating these events augments children's  
390 perceptions of their competencies, resulting in better school adjustment.

### 391 ***The relationship between social acceptability and school adjustment as mediated by school*** 392 ***engagement and academic self-concept***

393 The results of our study indicate that the relationship between social acceptability and school adjust-  
394 ment is mediated by school engagement and academic self-concept. This is also congruent with the  
395 results of Buhs (2005), K. Chen et al. (2018), Gutiérrez et al. (2017), and Schwartz, Gorman,  
396 Nakamoto, and McKay (2006). Social acceptability is a major dimension of self-esteem and an impor-  
397 tant element in preparing children for adapting to school (Lindsey, 2014). Many childhood psychopa-  
398 thology indicators such as depression, anxiety, nocturnal enuresis, attention-deficit/hyperactivity,  
399 obesity, and sexual abuse experience are associated with low levels of self-esteem (Sukumaran,  
400 Vickers, Yates, & Garralda, 2003). In light of these findings, it can be assumed that students with high  
401 levels of social acceptability within their family and among their peers deal with school demands effec-  
402 tively and acquire higher levels of academic adequacy and competence. This can increase their school  
403 engagement and facilitate their adjustment to the school environment. These findings underscore the  
404 importance of social acceptability to school engagement and adjustment.

### 405 **Limitations and future directions**

406 Our findings must be interpreted in the context of certain limitations. First, our study sample com-  
 407 prised 5th- and 6th-grade students of elementary schools in northwest Iran; therefore, the results  
 408 cannot be easily generalised beyond the sample to schools of different demographic and cultural char-  
 409 acteristics. Future studies with more heterogeneous samples are needed to increase the external validity  
 410 of the results. Second, we used a cross-sectional sample with a correlational research design, which  
 411 precludes any causal inferences. Utilising a longitudinal design may help reveal causal connections.  
 412 Finally, all the variables of the hypothesised model were measured by self-report instruments, with  
 413 no access to more objective external data. The inclusion of other data available to schools such as  
 414 student grades, annual reports, and parent and/or staff surveys in future research is recommended.

### 415 **Implications**

416 The results of this study support the interaction of family and school factors in students' adjustment to  
 417 school. Parents are recommended to provide a coherent and supportive family environment in order  
 418 to facilitate the adjustment of their child to the school environment using participation in parenting  
 419 programs such as the Triple P-positive parenting program (Ashori *et al.*, 2015). More importantly,  
 420 school professionals should offer more attention and support to students experiencing volatile family  
 421 relationships. Students' adjustment to school can be promoted via encouraging them to participate in  
 422 school activities, communicate with peers and teachers, and discover more benefits regarding interper-  
 423 sonal communication. The mediating roles of school engagement and academic self-concept imply that  
 424 fragile, unstable family relationships may increase children's vulnerability to adjustment difficulties  
 425 through undermining their confidence in their ability to deal with interpersonal and academic tasks.  
 426 Our results suggest that collaboration between the family and school systems via strong and bilateral  
 427 communication methods will facilitate the school adjustment of elementary students. School profes-  
 428 sionals can also invite parents of students with low school adjustment to participate in parenting  
 429 programs aimed at enhancing family functioning. Our results also suggest that school adjustment levels  
 430 may be enhanced by encouraging students to participate in school-related cognitive, emotional or  
 431 behavioural activities. Such activities would provide opportunities for increased school engagement  
 432 and will serve to reinforce students' academic self-concept and improve academic achievement.

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### 435 **References**

- 436 Aar, L.V., Peters, S., Crujisen, R.V., & Crone, E. (2019). The neural correlates of academic self-concept in adolescence and  
 437 the relation to making future-oriented academic choices. *Trends in Neuroscience and Education*, *15*, 10–17.
- 438 Alves, A.F., Gomes, C.M.A., Martins, A., & Almeida, L.D.S. (2017). Cognitive performance and academic achievement:  
 439 How do family and school converge? *European Journal of Education and Psychology*, *10*, 49–56.
- 440 An, W., & Western, B. (2019). Social capital in the creation of cultural capital: Family structure, neighborhood cohesion, and  
 441 extracurricular participation. *Social Science Research*, *81*, 192–208.
- 442 Arens, A.K., Becker, M., & Möller, J. (2017). Social and dimensional comparisons in math and verbal test anxiety: Within-  
 443 and cross-domain relations with achievement and the mediating role of academic self-concept. *Contemporary Educational*  
 444 *Psychology*, *51*, 240–252.
- 445 Ashori, M., Afrooz, G., Arjmandnia, A.A., Pourmohamadreza-Tajrishi, M., & Ghobri-Bonab, B. (2015). The effectiveness  
 446 of group positive parenting program (Triple-P) on the mother-child relationships with intellectual disability. *Iranian*  
 447 *Journal of Public Health*, *44*, 290–301.
- 448 Bae, C.L., & Debusk-Lane, M. (2019). Middle school engagement profiles: Implications for motivation and achievement in  
 449 science. *Learning and Individual Differences*, *74*, 101753.
- 450 Barber, B.K., & Buehler, C. (1996). Family cohesion and enmeshment: Different constructs, different effects. *Journal of*  
 451 *Marriage and the Family*, *58*, 433–441.
- 452 Basharpour, S., Issazadegan, A., Zahed, A., & Ahmadian, L. (2010). Comparing academic self-concept and engagement to  
 453 school between students with learning disabilities and normal. *The Journal of Education and Learning Studies*, *5*, 47–64.

- 454 **Battle, J.** (1981). *Culture-free SEI: Self-esteem inventories for children and adults*. Seattle, WA: Special Child Publications.
- 455 **Bronfenbrenner, U.** (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental*  
456 *Psychology*, **22**, 723–742.
- 457 **Browne, M.W., & Cudeck, R.** (1993). Alternative ways of assessing model fit. In K.A. Bollen, & J.S. Long (Eds.), *Testing*  
458 *structural equation models* (pp. 136–162). Newbury Park, CA: Sage.
- 459 **Buhs, E.S.** (2005). Peer rejection, negative peer treatment, and school adjustment: Self-concept and classroom engagement as  
460 mediating processes. *Journal of School Psychology*, **43**, 407–424.
- 461 **Calafat, A., Gracia, F., Juan, M., Becona, E., & Fernandez-Hermida, J.R.** (2014). Which parenting style is more protective  
462 against adolescent substance use? Evidence within the European context. *Drug and Alcohol Dependency*, **138**, 185–92.
- 463 **Carthy, T., Horesh, N., Apter, A., & Gross, J.J.** (2010). Patterns of emotional reactivity and regulation in children with  
464 anxiety disorders. *Journal of Psychopathology and Behavioral Assessment*, **32**, 23–36.
- 465 **Chen, K.H.J., Chang, Y., Hsueh, C.T.** (2018). The influence of social context, Academic self-concept, and learning  
466 Engagement on academic Achievement: A comparison of Economically disadvantaged and General third graders in  
467 Taiwan. *Contemporary Educational Research Quarterly*, **26**, 073–107.
- 468 **Chen, S., Yeh, Y., Hwang, F., & Lin, S.S.** (2013). The relationship between academic self-concept and achievement:  
469 A multicohort–multioccasion study. *Learning and Individual Differences*, **23**, 172–178.
- 470 **Coie, J.D., & Dodge, K.A.** (1983). Continuities and changes in children's social status: A five-year study. *Merrill-Palmer*  
471 *Quarterly*, **29**, 261–282.
- 472 **Cuffe, S.P., McKeown, R.E., Addy, C.L., & Garrison, C.Z.** (2005). Family and psychosocial risk factors in a longitudinal  
473 epidemiological study of adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, **44**, 121–129.
- 474 **Early, D.M., Pianta, R.C., Taylor, L.C., & Cox, M.J.** (2001). Transition practices: Findings from a national survey of  
475 kindergarten teachers. *Early Childhood Education Journal*, **28**, 199–206.
- 476 **Eccles, J.S., & Midgley, C.** (1989). Stage/environment fit: Developmentally appropriate classrooms for early adolescents. In R.  
477 Ames & C. Ames (Eds.), *Research on motivation in education*, (vol. 3, pp. 139–181). New York: Academic Press.
- 478 **Feldman, M.A.** (2008). *High school outcomes of middle school bullying and victimization* (Unpublished doctoral thesis).  
479 University of South Florida, FL.
- 480 **Fernández-Zabala, A., Goñi, E., Camino, I., & Zulaika, L.M.** (2016). Family and school context in school engagement.  
481 *European Journal of Education and Psychology*, **9**, 47–55.
- 482 **Finning, K., Ukoumunne, O.C., Ford, T., Danielsson-Waters, E., Shaw, L., Jager, I.R., . . . Moore, D.A.** (2019). The asso-  
483 ciation between child and adolescent depression and poor attendance at school: A systematic review and meta-analysis.  
484 *Journal of Affective Disorders*, **245**, 928–938.
- 485 **Furrer, C., & Skinner, E.** (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal*  
486 *of Educational Psychology*, **95**, 148–161.
- 487 **Gallardo, L.O., Barrasa, A., & Guevara-Viejo, F.** (2016). Positive peer relationships and academic achievement across early  
488 and mid-adolescence. *Social Behavior and Personality: An International Journal*, **44**, 1637–1648.
- 489 **Guassi Moreira, J.F., & Telzer, E.H.** (2015). Changes in family cohesion and links to depression during the college transition.  
490 *Journal of Adolescence*, **43**, 72–82.
- 491 **Guo, J., Marsh, H.W., Parker, P.D., Morin, A.J.S., & Yeung, A.S.** (2015). Expectancy value in mathematics, gender and  
492 socioeconomic background as predictors of achievement and aspirations: A multi-cohort study. *Learning and*  
493 *Individual Differences*, **37**, 161–168.
- 494 **Guo, Q., Zhou, J., & Feng, L.** (2018). Pro-social behavior is predictive of academic success via peer acceptance: A study of  
495 Chinese primary school children. *Learning and Individual Differences*, **65**, 187–194.
- 496 **Gutiérrez, M., Tomás, J.M., Romero, I., & Barrica, J.M.** (2017). Perceived social support, school engagement and satisfaction  
497 with school. *Revista de Psicodidáctica*, **22**, 111–117.
- 498 **Han, F.** (2019). Longitudinal relations between school self-concept and academic achievement. *Revista De Psicodidáctica*  
499 [English ed.], **24**, 95–102.
- 500 **Heidari, F., Fallahi, V., & Hajiloo, J.** (2018). The role of parenting and attachment styles in predicting the students' adjust-  
501 ment to school. *Journal of School Psychology*, **7**, 138–151.
- 502 **Jiang, Y.H., Yau, J., Bonner, P., & Chiang, L.** (2017). The role of perceived parental autonomy support in academic achieve-  
503 ment of Asian and Latino American adolescents. *Electronic Journal of Research in Education Psychology*, **9**, 497–522.
- 504 **Joel Wong, Y., Uhm, S.Y., & Li, P.** (2012). Asian Americans' family cohesion and suicide ideation: Moderating and mediating  
505 effects. *American Journal of Orthopsychiatry*, **82**, 309–318.
- 506 **Kadir, M.S., & Yeung, A.S.** (2016). Academic self-concept. In *Encyclopedia of Personality and Individual Differences*  
507 (pp. 1–8). Springer International Publishing.
- 508 **Khalaila, R.** (2015). The relationship between academic self-concept, intrinsic motivation, test anxiety, and academic  
509 achievement among nursing students: Mediating and moderating effects. *Nurse Education Today*, **35**, 432–438.
- 510 **Kokkinos, C.M., & Hatzinikolaou, S.** (2011). Individual and contextual parameters associated with adolescents' domain  
511 specific self-perceptions. *Journal of Adolescence*, **34**, 349–360.

- 512 **Krannich, M., Goetz, T., Lipnevich, A.A., Bieg, M., Roos, A., Becker, E.S., & Morger, V.** (2019). Being over- or under-  
 513 challenged in class: Effects on students career aspirations via academic self-concept and boredom. *Learning and Individual*  
 514 *Differences*, **69**, 206–218.
- 515 **Krauss, S.E., Kornbluh, M., & Zeldin, S.** (2017). Community predictors of school engagement: The role of families and  
 516 youth-adult partnership in Malaysia. *Children and Youth Services Review*, **73**, 328–337.
- 517 **Ladd, G.W., & Dinella, L.M.** (2009). Continuity and change in early school engagement: Predictive of children's achievement  
 518 trajectories from First to Eighth Grade? *Journal of Educational Psychology*, **101**, 190–206.
- 519 **Leidy, M.S., Guerra, N.G. & Toro, R.I.** (2010). Positive parenting, family cohesion, and child social competence among  
 520 immigrant Latino families. *Journal of Family Psychology*, **24**, 252–260. doi.10.1037/a0019407.
- 521 **Lindsey, E.W.** (2014). Physical activity play and preschool children's peer acceptance: Distinctions between rough-and-  
 522 tumble and exercise play. *Early Education & Development*, **25**, 277–294.
- 523 **Liu, K.S., Cheng, Y.Y., Chen, Y.L., & Wu, Y.Y.** (2009). Longitudinal effects of educational expectations and achievement  
 524 attributions on adolescent's academic achievements. *Adolescence*, **44**, 911–924.
- 525 **Liu, W.C. & Wang, C.K.J.** (2005). Academic self-concept: A cross-sectional study of grade and gender differences in a  
 526 Singapore Secondary School. *Asia Pacific Education Review*, **6**, 20–27.
- 527 **Llorca, A. Richaud, M.C. & Malonda, E.** (2017). Parenting, peer relationships, academic self-efficacy, and academic achieve-  
 528 ment: direct and mediating effects. *Frontiers in Psychology*, **8**, 2120.
- 529 **Lösch, T., Lüdtke, O., Robitzsch, A., Kelava, A., Nagengast, B., & Trautwein, U.** (2017). A well-rounded view: Using an  
 530 interpersonal approach to predict achievement by academic self-concept and peer ratings of competence. *Contemporary*  
 531 *Educational Psychology*, **51**, 198–208.
- 532 **Lowe, K., & Dotterer, A.M.** (2013). Parental monitoring, parental warmth, and minority youths' academic outcomes:  
 533 Exploring the Integrative Model of Parenting. *Journal of Youth and Adolescence*, **42**, 1413–1425.
- 534 **Lu, M., Walsh, K., White, S., & Shield, P.** (2017). The associations between perceived maternal psychological control and  
 535 academic performance and academic self-concept in Chinese adolescents: The mediating role of basic psychological needs.  
 536 *Journal of Child and Family Studies*, **26**, 1285–1297.
- 537 **Lv, B., Lv, L., Yan, Z., & Luo, L.** (2019). The relationship between parental involvement in education and childrens academic/  
 538 emotion profiles: A person-centered approach. *Children and Youth Services Review*, **100**, 175–182.
- 539 **Lv, B., Zhou, H., Liu, C., Guo, X., Zhang, C., Liu, Z., & Luo, L.** (2018). The relationship between mother-child discrepancies  
 540 in educational aspirations and childrens academic achievement: The mediating role of childrens academic self-efficacy.  
 541 *Children and Youth Services Review*, **86**, 296–301.
- 542 **Maltais, C., Duchesne, S., Ratelle, C.F., & Feng, B.** (2017). Learning climate, academic competence, and anxiety during the  
 543 transition to middle school: Parental attachment as a protective factor. *European Review of Applied Psychology*, **67**, 103–112.
- 544 **Marsh, H.W., & Craven, R.G.** (2006). Reciprocal effects of self-concept and performance from a multidimensional perspec-  
 545 tive: Beyond seductive pleasure and unidimensional perspectives. *Perspectives on Psychological Science*, **1**, 133–163.
- 546 **Marsh, H.W., & O'Mara, A.** (2008). Reciprocal effects between academic self-concept, self-esteem, achievement, and attain-  
 547 ment over seven adolescent years: Unidimensional and multidimensional perspectives of self-concept. *Personality and*  
 548 *Social Psychology Bulletin*, **34**, 542–552.
- 549 **Marsh, H.W., Pekrun, R., Lichtenfeld, S., Guo, J., Arens, A.K., & Murayama, K.** (2016). Breaking the double-edged sword  
 550 of effort/trying hard: Developmental equilibrium and longitudinal relations among effort, achievement, and academic self-  
 551 concept. *Developmental Psychology*, **52**, 1273–1290.
- 552 **Marsh, H.W., Relich, J.D., & Smith, I.D.** (1983). Self-concept: The construct validity of interpretations based upon the SDQ.  
 553 *Journal of Personality and Social Psychology*, **45**, 173–187.
- 554 **Miranda-Zapata, E., Lara, L., Navarro, J.-J., Saracostti, M., & de-Toro, X.** (2018). Modelling the Effect of School  
 555 Engagement on Attendance to Classes and School Performance. *Revista de Psicodidáctica* [English ed.], **23**, 102–109.
- 556 **Moreira, P.A., Dias, A., Matias, C., Castro, J., Gaspar, T., & Oliveira, J.** (2018). School effects on students' engagement with  
 557 school: Academic performance moderates the effect of school support for learning on students' engagement. *Learning and*  
 558 *Individual Differences*, **67**, 67–77.
- 559 **Morris, A.S., Silk, J.S., Steinberg, L., Myers, S.S., & Robinson, L.R.** (2007). The role of the family context in the development  
 560 of emotion regulation. *Social Development*, **16**, 361–388.
- 561 **Nasiri, M., Micaelimane, F., & Issazadegan, A.** (2017). Structural relationship between perceived difficulty, social compari-  
 562 son and academic self-concept with academic adjustment of BA students in Urmia University. *Quarterly Journal of*  
 563 *Research in School and Virtual Learning*, **5**, 9–22.
- 564 **Niepel, C., Brunner, M., & Preckel, F.** (2014). Achievement goals, academic self-concept, and school grades in mathematics:  
 565 Longitudinal reciprocal relations in above average ability secondary school students. *Contemporary Educational Psychology*,  
 566 **39**, 301–313.
- 567 **Olson, D.H., & Gorall, D.M.** (2003). Circumplex model of marital & family systems. In F. Walsh (Ed.) *Normal family*  
 568 *processes* (3rd ed., pp. 514–547). New York: Guilford Press.
- 569 **Olson, D.H., Russell, C.S., & Sprenkle, D.H.** (1983). Circumplex Model of marital and family systems: VI. Theoretical  
 570 update. *Family Process*, **22**, 69–83.

- 571 **Olson, D.H., Sprenkle, D.H., & Russell, C.** (1989). Circumplex model of marital and family systems: I. Cohabitation and  
572 adaptability dimensions, family types, and clinical applications. *Family Process*, **18**, 3–28.
- 573 **Piers, E.V., & Harris, D.B.** (1964). Age and other correlates of self-concept in children. *Journal of Educational Psychology*, **55**,  
574 91–95.
- 575 **Preckel, F., Niepel, C., Schneider, M., & Brunner, M.** (2013). Self-concept in adolescence: A longitudinal study on reciprocal  
576 effects of self-perceptions in academic and social domains. *Journal of Adolescence*, **36**, 1165–1175.
- 577 **Qin, Y., Wan, X., Qu, S., & Chen, G.** (2015). Family cohesion and school belonging in preadolescence: Examining the  
578 mediating role of security and achievement goals. *SHS Web of Conferences*, **19**, 02004.
- 579 **Quin, D., Heerde, J.A., & Toumbourou, J.W.** (2018). Teacher support within an ecological model of adolescent  
580 development: Predictors of school engagement. *Journal of School Psychology*, **69**, 1–15.
- 581 **Ratelle, C.F., Duchesne, S., & Guay, F.** (2017). Predicting school adjustment from multiple perspectives on parental  
582 behaviors. *Journal of Adolescence*, **54**, 60–72.
- 583 **Reeb, B.T., Chan, S.Y.S., Conger, K.J., Martin, M.J., Hollis, N.D., Serido, J., & Russell, S.T.** (2015). Prospective effects of  
584 family cohesion on alcohol-related problems in adolescence: Similarities and differences by race/ethnicity. *Journal of Youth  
585 and Adolescence*, **44**, 10, 1941–1953.
- 586 **Reijntjes, A., Kamphuis, J.H., Prinzie, P., Boelen, P.A., van der Schoot, M., & Telch, M.J.** (2011). Prospective linkages  
587 between peer victimization and externalizing problems in children: A meta-analysis. *Aggressive Behavior*, **37**, 215–222.
- 588 **Rezaei-Dehaghani, A., Keshvari, M., & Paki, S.** (2018). The relationship between family functioning and academic achieve-  
589 ment in female high school students of Isfahan, Iran, in 2013–2014. *Iranian Journal of Nursing and Midwifery Research*,  
590 **23**, 183.
- 591 **Rimm-Kaufman, S.E., & Pianta, R.C.** (2000). An ecological perspective on the transition to kindergarten: A theoretical  
592 framework to guide empirical research. *Journal of Applied Developmental Psychology*, **21**, 491–511.
- 593 **Ryan, R.M., & Deci, E.L.** (2000). Self-determination theory and the facilitation of intrinsic motivation, social development,  
594 and well-being. *American Psychologist*, **55**, 68–78.
- 595 **Sahil, S.A.S., & Hashim, R.A.** (2011). The roles of social support in promoting adolescent's classroom cognitive engagement  
596 through academic self-efficacy. *Malaysian Journal of Learning and Instruction*, **8**, 49–69.
- 597 **Samooei, R., Bagherzadeh, H., & Sabzavari, M.** (2005). Assessing the reliability of social acceptance questionnaire among  
598 elementary students of Esfahan city. *Journal of Behavioral Science*, **2**, 6–12.
- 599 **Santa Lucia, R.C., & Gesten, E.L.** (2000). Adjustment across the middle school transition: Gender and race considerations.  
600 *Poster presentation at the annual meeting of the American Psychological Association*, Washington, D.C.
- 601 **Schwartz, D., Gorman, A.H., Nakamoto, J., & McKay, T.** (2006). Popularity, social acceptance, and aggression in adolescent  
602 peer groups: Links with academic performance and school attendance. *Developmental Psychology*, **42**, 1116–1127.
- 603 **Selen, D.Z., & Tuncay, E.** (2019). School adjustment of first-grade primary school students: Effects of family involvement,  
604 externalizing behavior, teacher and peer relations. *Children and Youth Services Review*, **101**, 307–316.
- 605 **Serrano, C., & Andreu, Y.** (2016). Perceived emotional intelligence, subjective well-being, perceived stress, engagement and  
606 academic achievement of adolescents. *Revista de Psicodidáctica*, **21**, 357–374.
- 607 **Silinskas, G., & Kikas, E.** (2019). Math homework: Parental help and children's academic outcomes. *Contemporary  
608 Educational Psychology*, **59**, 101784.
- 609 **Slicker, E.K.** (1997, August). *Family adaptability and cohesion: Relationship to older adolescent behaviors*. Paper presented at  
610 the 105th Annual Meeting of the American Psychological Association, Chicago, IL.
- 611 **Stefansson, K.K., Gestsdottir, S., Birgisdottir, F., & Lerner, R.M.** (2018). School engagement and intentional self-regulation:  
612 A reciprocal relation in adolescence. *Journal of Adolescence*, **64**, 23–33.
- 613 **Sticca, F., Goetz, T., Nett, U.E., Hubbard, K., & Haag, L.** (2017). Short- and long-term effects of over-reporting of grades on  
614 academic self-concept and achievement. *Journal of Educational Psychology*, **109**, 842–854.
- 615 **Sukumaran, S., Vickers, B., Yates, P., & Garralda, M.E.** (2003). Self-esteem in child and adolescent psychiatric patients.  
616 *European Child & Adolescent Psychiatry*, **12**, 190–197.
- 617 **Szumski, G., & Karwowski, M.** (2019). Exploring the Pygmalion effect: The role of teacher expectations, academic self-  
618 concept, and class context in students' math achievement. *Contemporary Educational Psychology*, **59**, 101787.
- 619 **Tetzner, J., Becker, M., & Maaz, K.** (2016). Development in multiple areas of life in adolescence. *International Journal of  
620 Behavioral Development*, **41**, 704–713.
- 621 **Tilbury, C., Creed, P., Buys, N., Osmond, J., & Crawford, M.** (2014). Making a connection: School engagement of young  
622 people in care. *Child & Family Social Work*, **19**, 455–466.
- 623 **Vandenbroucke, L., Spilt, J.L., Verschuere, K., & Baeyens, D.** (2018). The effects of peer rejection, parent and teacher  
624 support on working memory performance: An experimental approach in middle childhood. *Learning and Individual  
625 Differences*, **67**, 12–21.
- 626 **Veas, A., Castejón, J., Miñano, P., & Gilar-Corbí, R.** (2019). Early adolescents' attitudes and academic achievement: The  
627 mediating role of academic self-concept. *Revista De Psicodidáctica [English ed.]*, **24**, 71–77.
- 628 **Wang, D., & Fletcher, A.C.** (2015). Parenting style and peer trust in relation to school adjustment in middle childhood.  
629 *Journal of Child and Family Studies*, **25**, 988–998.

- 630 **Wang, M.T., & Peck, S.** (2013). Adolescent educational success and mental health vary across school engagement profiles.  
631 *Developmental Psychology*, **49**, 1266–1276.
- 632 **Wang, M.T., Willett, J.B., & Eccles, J.S.** (2011). The assessment of school engagement: Examining dimensionality and  
633 measurement invariance by gender and race/ethnicity. *Journal of School Psychology*, **49**, 465–480.
- 634 **West, S.G., Finch, J.F., & Curran, P.J.** (1995). Structural equation models with nonnormal variables: Problems and remedies.  
635 In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 56–75). Thousand Oaks, CA: Sage  
636 Publications.
- 637 **Wolff, F., Helm, F., Zimmermann, F., Nagy, G., & Möller, J.** (2018). On the effects of social, temporal, and dimensional  
638 comparisons on academic self-concept. *Journal of Educational Psychology*, **110**, 1005–1025.
- 639 **Wouters, S., Germeijs, V., Hilde, C., & Verschueren, K.** (2011). Academic self-concept in high school: Predictors and effects  
640 on adjustment in higher education. *Scandinavian Journal of Psychology*, **52**, 586–594.
- 641 **Zhang, L., Eggum-Wilkens, N.D., Eisenberg, N., & Spinrad, T.L.** (2017). Children's shyness, peer acceptance, and academic  
642 achievement in the early school years. *Merrill-Palmer Quarterly*, **63**, 458.
- 643 **Zhu, X., Tian, L., Zhou, J., & Huebner, E.S.** (2019). The developmental trajectory of behavioral school engagement and its  
644 reciprocal relations with subjective well-being in school among Chinese elementary school students. *Children and Youth  
645 Services Review*, **99**, 286–295.