


ORIGINAL ARTICLE

Teacher and peer relationships and life satisfaction: Mediating the role of student resilience in south korean elementary schools

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Abstract

The purpose of this study was to examine the association between life satisfaction and positive student-teacher and peer relationships. Further, we aimed to test the mediating effects of student resilience in a multilevel model. The data were collected from elementary students in South Korea. To examine the mediating effects of student resilience, multilevel structural equation modelling was conducted. The results indicated that schools with positive student-teacher relationships correlated with higher life satisfaction for children. This relationship was fully mediated by student resilience. However, the mediating effects of student resilience in the relationship between peer relationships and life satisfaction was found to be at the individual level rather than by school climate. Practical implications on ways to improve students' life satisfaction within the school and classroom settings are discussed.

Keywords: life satisfaction; teacher relationships; peer relationships; student resilience; school climate; multilevel structural equation modelling (MSEM)

Life satisfaction is an important indicator of subjective wellbeing (Bradshaw, Martorano, Natali, & Nuebourg, 2013). Life satisfaction is a subjective and global evaluation of one's quality of life from a reflective and evaluative perspective, rather than a momentary affective experience (Diener, Suh, Lucas, & Smith, 1999; Ng, Huebner, Hills, & Valois, 2018). In other words, it refers to the degree of satisfaction one experiences in life. Many studies have suggested that life satisfaction is associated with desirable life outcomes in both the short and long term. For instance, children who are satisfied with their lives demonstrate adaptive characteristics, such as higher self-efficacy, successful academic performance, and active engagement in school (Lewis, Huebner, Malone, & Valois, 2011). They also exhibit few psychological and behavioural problems (Huebner, Suldo, Smith, & McKnight, 2004; Sun & Shek, 2013), and have an abundance of coping abilities and social competencies that are associated with positive and promising developmental outcomes in adulthood (Currie et al., 2012).

In a previous research (S. Kim, Kang, & Bang, 2010), the components of life meaning perceived by late school-aged children in Grades 4, 5, and 6 in elementary schools were 'to achieve' (e.g., to make dreams come true, to be a great person, to be happy) and 'to do' (e.g., to study, to make money, to be filial, to do volunteer work). Furthermore, late school-aged children reported that they feel meaning in life when they perform meaningful behaviours, are emotionally comfortable, and are helping or getting help from others. Namely, children in this period can build life meaning through active participation in

the environment or world, based on cognitive development, and in this process, positive social relationships and emotional stability could be considered facilitators for promoting life satisfaction.

In a school context, children experience two representative and significant social relationships: peer relationships and teacher-student relationships. Similar to attachment theory, children are able to build strong social ties by considering teachers and peers as significant others, which in turn provides important opportunities and positive experiences for the children (Schwabe, Korthals, & Schils, 2019). Peer relationships generally refer to the type and quality of social interaction among same-aged children. In previous research (DeRosier, 2019; Schwabe et al., 2019), this relationship ranged from very close friends to a small specific group (e.g., clique, soccer team) to large peer groups (e.g., class, school). Despite these different characteristics, diverse peer groups commonly provide children with a sense of belonging and a sense of functioning as members of society beyond the family unit. Belonging to a peer group and being accepted by peers is important for children's psychological and social development, because a major function of peer groups is to support children in potentially threatening developmental processes, such as individuation from parents and identity development (Rubin, Bukowski, & Parker, 2006; Schwarz et al., 2012). For instance, children with loss of relatedness to peers may show positive academic performance if they have satisfying relationships with adults (e.g., parents and teachers); nevertheless, they may have a negative emotional experience in the classroom (Furrer & Skinner, 2003). Thus, the experience of engaging in a supportive, respectful and intimate relationship, and the sense of belongingness can provide developmentally appropriate psychological supportiveness beyond the realm of family, thereby affecting children's life satisfaction (Mellor, Stokes, Firth, Hayashi, & Cummins, 2008; Schwarz et al., 2012).

Furthermore, teachers have an important role in improving students' subjective wellbeing and life satisfaction (Suldo, Riley, & Shaffer, 2006). Teachers are responsible for establishing the classroom environment, which can significantly affect students' psychological experiences in terms of both learning and peer interactions. Previous research studies (Moos, 1979; Suldo et al., 2006) have pointed out that teachers are key players in forming a positive social climate in school because their behaviour models how students should interact with peers (Westling-Allodi, 2002). Also, teachers provide a school environment that can promote students' emotional, cognitive and social development by caring for and supporting them, setting high expectations and encouraging each student to play a meaningful role (Vitto, 2003). Furthermore, the feeling of acceptance from teachers, such as trust and expectations for success, willingness to listen and interest in the students, can significantly affect children's self-efficacy and self-worth (Paulson & Everall, 2001). Children who have a relationship with teachers that provides students with warmer and more supportive experiences are likely to be more internally motivated and feel higher competency, with higher self-esteem and interest in learning, than those who do not (Midgley, Feldlaufer, & Eccles, 1989; Ryan & Grolnick, 1986).

Taken together, peer relationships and relationships with teachers suggest that the relationship children have with their parents at home can also be extended to how children interact with organised society. Children's positive relationships at school, based on a feeling of connectedness, reinforces their perception of their environment as safe, which further fosters cognitive development and facilitates positive learning and motivational outcomes (Schwabe et al., 2019). Certainly, the quality of social relationships affects one's life satisfaction (Diener et al., 1999). However, previous studies implicate that there may be different mechanisms by which relationships with peers and teachers differentially influence children. Students who have positive relationships with teachers tend to show greater academic coping, engagement, self-regulation and perceived control; however, peer relationships were not related to these outcomes (Ryan, Stiller, & Lynch, 1994). Further, in a study on the effect of a reference group on academic self-concept (Schwabe et al., 2019), positive relationships with teachers showed significant moderating effects, whereas no moderating effects of peer relationships were found. Thus, we need to explore the effects of a more comprehensive and general psychological system, in which the social relationships that children experience affect their overall development.

Ego-resiliency is a representative psychological system that influences children's overall cognitive, emotional and social development (Block & Block, 1980). It is a competence that enables individuals to

adjust to constantly changing environmental situations (Farkas & Orosz, 2015). The concept of resilience was first introduced by Block (1965) in a psychological context and applied to invulnerable or stress-resistant children. More recently, it is understood as a stress-protective and health promoting variable, which contributes to not only psychological growth and development (Richardson, 2002), but also to wellbeing and good quality of life (Windle, Bennett, & Noyes, 2011). It is known to contribute to psychological wellbeing and it develops through and promotes socialisation (Farkas & Orosz, 2015). The term 'student resilience', rather than ego-resiliency, is the preferred term in educational settings (Morrison & Allen, 2009; Stephens, 2013). It is a useful term to describe how students can confidently face challenges and successfully move forward (Stephens, 2013). Therefore, in this study on the resilience of elementary school students, we will also use the term 'student resilience'.

The antecedent factors of resilience that have been found in previous studies can be classified into genetic characteristics, personality traits, socialisation by gender, and relationships with parents (Jeong & Kim, 2015). According to Taylor and colleagues (2014), the serotonin transporter gene (*SLC6A4*) is a predictor that partially explains the level of individual differences in student resilience. Also, it has an additive effect on the formation of student resilience, along with parenting style. Individual emotional traits also affect the development of student resilience. High negative emotions, such as frustration and anger, impede the development of student resilience, affecting the level of change (Taylor, Eisenberg, Spinrad, Eggum, & Sulik, 2013), and the optimism tends to be a positive predictor of student resilience (Klohn, 1996). Children also show differences in the level of development of student resilience by gender, and it is implicated that it is due to gender socialisation rather than biological differences. This is because girls and boys face different socialisation processes and expectations in the growth process and thus face different challenges in life (Block & Block, 2006; Chuang, Lamb, & Hwang, 2006). Finally, interactions with parents from infancy to adolescence, and parenting and communication styles affect student resilience. In particular, it is known that a secure attachment with parents, supportive parenting style, mother's sensitivity and warmth have a positive effect on student resilience (Gjerde, Block, & Block, 1986; Swanson, Valiente, Lemery-Chalfant, O'Brien, 2011; Taylor et al., 2014). In conclusion, it would be appropriate to consider student resilience as a result of the interaction between the individual's internal characteristics and the external environment (Jeong & Kim, 2015).

If so, we must focus on how student resilience can be manifested and developed in the school context, since school is a significant environmental factor that influences school-aged children's life satisfaction through relationships with teachers and peers (Piko & Hamvai, 2010). In the school context and considering the construct of ego-resiliency, children with high student resilience are those students who actively cope with and engage in challenging school settings through the various resources or problem-solving strategies available to them (e.g., inner resources, cooperation with peers, advice from teachers, and learning by imitating peers or teachers). These characteristics enable them to lead an open, positive and independent school life. As yet, most studies have reported that students with high levels of resiliency have adaptive school life. According to a study (Jo, 2014) that summarised the previous studies on resiliency in elementary school students, student resilience has more influence on school life adjustment compared to parenting attitude. This is because student resilience is closely related to interpersonal relationships (Shin, 2005). Also, children with higher resiliency are less stressed with school life, and when they experience stress, they show more active, positive and flexible coping strategies that pursue social support (Lim, 2005). Children with high resiliency and high perceptions of social support have shown positive school adjustment (Park, 2010), and children with low resiliency were found to have low school adjustment, regardless of academic stress level (Lee, 2010). Furthermore, it has been found that student resilience can mitigate the negative effects of children's daily stress on school adjustment (H.S. Kim, 2013).

Conversely, few studies have shown that the social relationships that children experience in school affect their student resilience. Fortunately, some studies provide evidence that interpersonal relationships at school can enhance student resilience. In Han's (2013) study, it was found that the quality of teacher-child relationships formed by facilitative communication positively affected student resilience, and in turn, the improved student resilience acted as a mediator to the children's school happiness.

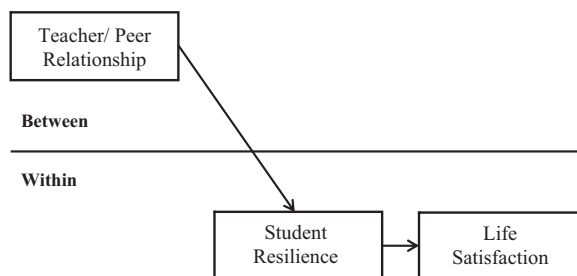


Figure 1. Research model.

Also, elementary school students with psychological wellbeing formed by positive relationships with others (i.e., parents, teachers, and peers) were found to experience a low level of daily stress in which student resilience operated as a partial mediating factor (Jang, Choi, & Lee, 2016). In the relationship between teacher's social support and adjustment to school life, student resilience plays a partially mediating role. Furthermore, the relationship with burnt-out teachers, whose interest and affection for children are low, affects student burnout by completely mediating student resilience (Sung & Choi, 2018). Thus, student resilience could be a mediator between interpersonal relationships at school and children's psychological wellbeing.

This study adopted a multilevel approach to identify the relationships between social relationships at school, student resilience, and life satisfaction of elementary school students. Specifically, we have speculated that the positive relationship with school members (i.e., peers and teachers) would predict student resilience and life satisfaction. In addition, we set the relationships with teachers and peers as a culture that children share in school. Children would share beliefs, values and attitudes about social relationships, which can develop interactions with each other through this climate (Koth, Bradshaw, & Leaf, 2008). Moreover, it was hypothesised that student resilience would predict children's life satisfaction. However, considering the results of the previous studies mentioned above, the effects of peer and teacher relationships on children's psychological wellbeing may be distinct from one another. Under this assumption, we attempted to verify the mediating effect of student resilience in two potential associations, namely of children's life satisfaction with their relationship with teachers and with their relationship with peers. The research model (2-1-1 model) is presented in Figure 1.

The hypotheses postulated for the purposes of this study are as follows.

Hypothesis 1. The variance of children's student resilience and life satisfaction will differ between schools.

Hypothesis 2-1. Supportive teacher relationships as a school-level variable will predict children's life satisfaction through student resilience.

Hypothesis 2-2. Supportive peer relationships as a school-level variable will predict children's life satisfaction through student resilience.

Methods

Participants and procedures

This study used data from the Korean Child and Youth Panel Survey (KCYPS) longitudinal data collected by the National Youth Policy Institute (NYPI) of South Korea from 2010 to 2016. The KCYPS was intended to provide a comprehensive understanding of the growth and developmental processes of children and adolescents, as well as the problems and related factors experienced during the process. The respondents participated in this panel survey once a year from the 4th grade of

elementary school to the 1st year of high school. NYPI reported collecting data from a total of 95 elementary schools, but unfortunately these data do not provide information about classroom environment. Further, some of the collected data variables are measured annually, while others are not. In particular, the student resilience variables used in this study were measured at 3-year intervals (e.g., 4th grade of elementary school, the 1st grade of middle school, the 1st grade of high school). Finally, our study excluded nine schools with fewer than 20 students in the school (i.e., small size alternative schools). The total number of respondents included in these 86 schools was 2233. At Time 1, all participants ($N = 2233$; 4th grade in elementary school; female 47.7%) completed the survey to measure the teacher relationship (no missing data), peer relationship (no missing data), and student resilience (missing data $n = 1$) as variables. After one year, at Time 2, participants ($N = 2132$; female 47.8%) were all 5th-grade elementary school students and the dependent variable (i.e., life satisfaction, missing data $n = 101$) was measured. According to Statistics Korea (2017), the reasons for the missing values during Time 2 were: participation rejection, 82.5%; failure to follow up, 16.7%; and other, 0.9%. To deal with missing data, we used multiple imputation (MI) by Mplus 5.0. All parents or guardians consented to children's participation in the KCYPS.

Measures

Teacher and peer relationships. The School Life Adaptation Scale (Min, 1991) for elementary school students was revised by the National Youth Policy Institute (NYPI). The scale includes five items for the teacher relationship and five for the peer relationship. Further, it measures attitudes toward teachers and peers (e.g., 'I talk freely and comfortably with my teacher'; 'I share mine with classmates if a friend does not bring his or her own textbook or supplies'), and the level of intimacy with them (e.g., 'I hope my teacher will be my homeroom teacher again next year'; 'I get along well with my classmates'). Participants were required to rate the items on a Likert-type scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Higher scores indicate a higher quality level of teacher and peer relationships. Cronbach's alphas in a previous study were .83 for the teacher relationship and .83 for the peer relationship (Jeong, 2009). In this study, the values were .84 and .73 respectively.

Student resilience. To measure student resilience, we used 14 items that were translated by Yoo and Shim (2002) from the ER-89 scale (Block & Kremen, 1996), and revised and supplemented by Kwon (2002) for elementary, middle and high school students. The scale consists of items on active engagement in the world (e.g., 'I enjoy dealing with new and unusual situations'), degree of solving problems with various strategies (e.g., 'I quickly get over and recover from being startled'), and integrated ability to adapt (e.g., 'I am willing to describe myself as a "strong" personality'). Participants were required to rate the items on a Likert-type scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Higher scores indicate a higher level of student resilience. Cronbach's alpha in a previous study was .76 (Block & Kremen, 1996), while in this study it was .85.

Students' life satisfaction. To measure life satisfaction, three items of the scale developed by S. Kim and colleagues (2006) were used. The scale includes questions about the degree of satisfaction with one's life as follows: (1) 'I enjoy my life', (2) 'I think my life is happy', and (3) 'I do not have many worries'. Participants were required to rate the items on a Likert-type scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Higher scores indicate a higher level of life satisfaction. Cronbach's alpha in the previous study was .82 (Shim & Yi, 2018), while it was .79 in this study.

Analysis strategy. First, descriptive statistics and correlational analyses were used for a basic understanding of the variables (i.e., teacher relationship, peer relationship, student resilience, and life satisfaction). Next, to test the hypotheses, multilevel structural equation modeling (MSEM) was performed using Mplus 5.0. MSEM is a method that combines multilevel modeling (MLM) and structural equation modeling (SEM). First, MLM is a general method for analysing mediating effects with nested data by delineating the variance of dependent variables into within-level (i.e., level-1) and between-level

(i.e., level-2) effects, considering the hierarchical characteristics of the data. Furthermore, SEM is a method to analyse the complex structural relationships between variables. To evaluate the model, we used the comparative fit index (CFI), because the chi-squared test and Tucker-Lewis index (TLI) are sensitive to sample size, whereas the CFI is not (Hong, 2000). MSEM has the advantage of effectively addressing the problems of convergence of within- and between-level effects, and the bias of indirect effect estimates, which are the main disadvantages of the earlier MLM. As such, MSEM enables examining the direct and indirect effects separately at each level (Preacher, Zhang, & Zyphur, 2011).

In this study, the values of the independent variables (i.e., teacher and peer relationships) were calculated by the mean of each school, and thus considered as level-2 data. In addition, the mediator (i.e., student resilience) and dependent variable (i.e., life-satisfaction) were calculated by the mean of individual students as level-1 data. The multilevel model, in which the value of the independent variable (X) is estimated at level 2 and the mediator (M) and dependent variables (Y) at level 1, is called the 2-1-1 (X-M-Y) model. In the 2-1-1 model, the path of '2-1', which indicates the relationships between X and M, only has effects at level 2. Further, in the '1-1' path, which indicates the relationships between M and Y, there are both level-1 and level-2 effects. When estimating the mediating effects, if these effects are not separately estimated at each level, an error occurs because of conflation in the coefficient estimation. This will also influence the estimation of the distorted indirect effect. Therefore, it is appropriate to analyse the nested data using MSEM in a multilevel mediation analysis where the units of analysis are present on multiple layers (Preacher, Zyphur, & Zhang, 2010). In the current study, the data were modelled based on the basic analysis model of 2-1-1 MSEM, which analyzes the measured variables at level 1 and level 2. A transformed *z* score was used for interpreting the results, and we applied Preacher's Mplus syntax (<http://quantpsy.org/supp.htm>).

Results

The descriptive statistics and intercorrelations for the four variables in this study are presented in Table 1. Next, intraclass correlations (ICC) were calculated with student resilience and life satisfaction at level 1 to test Hypothesis 1. As a result, regarding both the teacher and peer relationships, the ICCs for student resilience and life satisfaction were .05 and .04 respectively, indicating that 5% and 4% of the variance of each variable differ between each school respectively (level 2). Generally, previous social research studies commonly reported ICC values between .05 and .20 (Peugh, 2010). Thus, the ICC for student resilience regarding the student-teacher relationship would be acceptable at a moderate level, whereas ICC for life satisfaction is somewhat lower. Also, several previous studies (Barcikowski, 1981; No, Lee, Lee, & Hong, 2017) have suggested that it is appropriate to use multilevel modelling if the individuals are nested in the groups, even with low ICC. Therefore, in this study, multilevel analyses were applied, and Hypothesis 1 is supported.

Next, to test Hypotheses 2-1 and 2-2, Baron and Kenny's (1986) three-step model for analysing mediation was applied. Shown in Table 2, in the first step, the teacher relationship (X) significantly predicted student resilience (M; $B = .48, p = .000$). This result indicates that the schools with supportive student-teacher relationships would be related to higher student resilience for children. In the second step, the teacher relationship (X) significantly predicted students' life satisfaction (Y; $B = .10, p = .001$). This means that the schools with supportive student-teacher relationship would be related to higher life satisfaction for children. In the third step, it was investigated whether the effect of the independent variable (i.e., teacher relationship) on the dependent variable (i.e., students' life satisfaction) changed when controlling for the effect of the mediator (i.e., student resilience). The results showed that the teacher-student relationship had no significant effect on students' life satisfaction when controlling for student resilience ($B = -.13, p = .220$). As such, the direct effect of the teacher relationship on children's life satisfaction was not significant. Also, the effect of student resilience on students' life satisfaction was significant at both level 1 ($B = .20, p = .000$) and level 2 ($B = 1.03, p = .002$). The total effect of student resilience on students' life satisfaction, encompassing level 1 and level 2, was also

Table 1. Correlations Among Research Variables

	1	2	3	4	M	SD	Min	Max	S	K
1. Teacher relationship	–	.46**	.49**	.22**	3.15	.65	1.00	4.00	-.69	.16
2. Peer relationship	.45**	–	.74**	.47**	3.08	.48	1.00	4.00	-.40	.04
3. Student resilience	.43**	.55**	–	.52**	3.02	.49	1.00	4.00	-.33	.04
4. Life satisfaction	.17**	.23**	.26**	–	3.26	.64	1.00	4.00	-.65	.31

Note: ** $p < .01$; Upper: Level-2 (schools $n = 86$), Lower: Level-1 (students $n = 2233$). Min, Minimum value; Max, Maximum value; S, Skewness value, K, Kurtosis value.

Table 2. Multilevel Mediation: 2-1-1

Baron and Kenny's (1986) three-steps	Paths	Teacher			Peer		
		B	SE	p	B	SE	p
1	Relationship (X) → Student resilience (M)	.48	.03	.000	.54	.02	.000
2	Relationship (X) → Life satisfaction(Y)	.10	.03	.001	.12	.03	.000
3	Relationship (X) → Life satisfaction (Y)	-.13	.11	.220	-.71	1.40	.610
	Student resilience (M) → Life satisfaction (Y): Between level	1.03	.34	.002	2.19	2.84	.440
	Student resilience (M) → Life satisfaction (Y): Within level	.20	.03	.000	.18	.03	.000
	Student resilience (M) → Life satisfaction (Y): Within + Between level	1.23	.34	.000	2.37	2.83	.403
Mediation (2-1-1) $X \rightarrow M \rightarrow Y$	Coefficient (b)	.23			1.07		
	SE	.11			1.40		
	p	.040			.446		
	95% confidential interval	Lower .5%		Upper .5%	Lower .5%		Upper .5%
	.01		.44	-1.68		3.81	

positively significant ($B = 1.23, p = .000$). These results indicate that student resilience fully mediated the student-teacher relationship and students' life satisfaction. In addition, the indirect effect of student resilience, which differed at each level, was significant ($B = .23, 95\% \text{ CI } [.01, .44]$). Finally, the CFI was .93. Therefore, Hypothesis 2-1 was supported.

In Table 2, in the first and second steps, peer relationship (X) significantly predicted student resilience (M; $B = .54, p = .000$) and students' life satisfaction (Y; $B = .12, p = .000$). However, in the final step, the results indicate that peer relationship had no significant effect on students' life satisfaction when controlling for student resilience ($B = -.71, p = .610$). Moreover, the effect of student resilience on students' life satisfaction was nonsignificant at the between level ($B = 2.19, p = .440$), but it was significant at the within level ($B = .18, p = .000$). These results indicate that the mediating effect of student resilience on the relationship between peer relationships and life satisfaction can only occur at the individual level and is not

due to the influence of the school atmosphere (or culture). In addition, the total effect of student resilience on students' life satisfaction, encompassing level 1 and level 2, was also insignificant ($B = 2.37, p = .403$). Finally, the CFI score was .84. Therefore, Hypothesis 2-2 was not supported.

Discussion

School is a primary developmental setting that not only promotes the acquisition of developmental competencies necessary for academic success, subjective wellbeing and resiliency in life, but also prevents social, emotional, behavioural and academic difficulties (Ferner et al., 2001). The results of the study showed that the positive and supportive relationships at school played a role in improving children's life satisfaction. The findings and implications of this study are as follows.

First, there was a difference between schools in student resilience and life satisfaction; thus, Hypothesis 1 is supported. This makes it possible to infer that student resilience and life satisfaction may vary, not only by individual characteristics, but by the characteristics shared by the schools. Although the influence of school factors shown in this study was low at 4–5%, it is interesting that student resilience, which has been considered as an individual trait, can vary significantly depending on the characteristics of the organisation. In fact, previous studies have directly identified that the level of student resilience can vary depending on the characteristics of the school. However, Sung and Choi (2018) suggested that the level of student resilience of children would vary according to the characteristics of the classroom environment, which are formed by teacher factors. In other words, student resilience is an internal factor, such as personality and traits, but it can be changed by external factors, which can influence children's life satisfaction. Thus, we will discuss the implications of this in a comprehensive way, along with other findings from the presented study.

In this study, student resilience was found to be mediated by student-teacher relationships and students' life satisfaction. This result suggests that the positive relationships with teachers at school can provide a context in which students can develop their psychological, cognitive and socially resilient abilities, which can improve children's life satisfaction. Thus, Hypothesis 2-1 is supported; however, Hypothesis 2-2 cannot be supported, since another finding shows that peer relationships did not predict student resilience, nor did it predict life satisfaction when student resilience was controlled.

A question remains regarding why peers and teachers have different effects on children's student resilience and life satisfaction. In a previous research (Wang & Eccles, 2012), peer social support predicted students' school compliance (i.e., behavioural engagement) more strongly and school identification (i.e., emotional engagement) less strongly, compared to social support by teachers. In addition, after the effects of relatedness or support to teachers were controlled, the relatedness to peers cannot make contributions to children's school engagement or other academic outcomes (Ryan et al., 1994), and perceived peer support contributes to students' expectancies for success, but not to their achievement values nor to their effort or performance (Goodenow, 1993). This means that the influence of peer relationships on children may involve the effects of teachers. In self-determination theory (SDT), children are most motivated to learn when adults support their need to feel competent and they feel positively related to others and autonomous (Hamre, Pianta, Mashburn, & Downer, 2007). Further, the cognitive and linguistic development of children depends on the opportunities that adults provide to express skills and scaffold more complex ones (Vygotsky, 1991). In addition, the role of the teacher in managing students' behaviour, time and attention in the classroom is known to play an important role in the development of the brain in relation to children's self-regulation (Blair, 2002). These previous studies can be significant in interpreting the results of our research, considering that student resilience regulates ego-control abilities, which means cognitive, emotional and social competencies for the active challenge and engagement of children themselves. Furthermore, it is noteworthy that children tend to associate with peers who share similar motivational orientations. Lynch and Cicchetti (1997) emphasised that this is the reason why peer relationships and student-teacher relationships have different influences on children. Also, considering that peer relationships are measured in a shared atmosphere

throughout the school, children in a large peer group may have more natural and relevant information-sharing compared to close intimacy (Wentzel, 2017). This implies that advanced and developmental interactions with teachers can promote the growth of student resilience, while interactions with peers who have similar developmental levels could not serve as an appropriate scaffold in this process. Overall, in the context of providing emotional support, student resilience could be enhanced with appropriate motivation for learning and engagement, opportunities to learn strategies that are slightly higher than one's own, and management of self-regulatory behaviour.

Practical implications

In previous research (Hamre & Pianta, 2007), interactions with teachers in classrooms are the proximal processes that determine the extent to which schooling effectively leads to children's development and learning. According to such studies, the CLASS Framework shows three domains organised by teacher-student interactions in the classroom. Concretely, in the classroom, it is suggested that teachers attempt to provide emotional support, effective behaviour management strategies for enhancing the children's self-regulatory mechanisms (i.e., classroom organisation), and instructional support for the children's cognitive development. Specifically, schools need to build, strengthen and promote supportive relationships as well as to educate people about resilience. Also, it is important for schools to focus on improving students' autonomy and responsibility, and in this process, they need to create opportunities for personal challenges. What should not be overlooked is that any approach to building child resilience needs to take into account the individual child, their needs and their unique circumstances (Beyond Blue Ltd., 2017).

In conclusion, we have evaluated the role of teachers in classrooms and schools. First, to develop children's resilient psychological, behavioural and social abilities, it is suggested that teachers ensure the school environment is characterised by a safe and positive emotional climate. To do this, it is recommended that teachers strive to establish a relationship that continuously provides care and protection for students. Taylor and colleagues (2014) report that the quality of parenting, such as maternal sensitivity and warmth, combined with genetic factors, affects student resilience. In elementary schools, the teacher acts in loco parentis — in place of the parent. Therefore, teachers' collaborative approach and providing trust and support, such as high expectations for success, willingness to listen and personal concern can create a school climate that improves children's student resilience (Cohen, 2013). Children continuously exposed to this school climate will have the ability to recover quickly because of their higher psychological stability, even if they experience stressful situations or unexpected events. Furthermore, the role of a teacher as a caregiver and supporter, although not directly reported in this study, suggests the possibility that schools and teachers could serve as a protective factor to enhance the inner resources of children from disadvantaged or psychologically vulnerable families. Thus, school must be a context that ensures not only children's physical safety, but also their emotional and social security.

Second, it is suggested that teachers set positive and high expectations for students. According to previous research (Chu, 2015), a student who has experienced high expectations from teachers would believe that 'I am a competent and capable person'. In addition, teachers with high and positive expectations for students can clearly communicate a message of trust and acceptance, and that they believe 'students can make better choices'. Positive class management strategies, including positive feedback and praise based on the teacher's high expectations of students, can help students learn more effectively what is appropriate and desirable in any given context. This implies that teachers' expectations, including their trust in students' potential, may provide students with more opportunities to engage actively in the world and develop problem-solving strategies. Thus, it is necessary for teachers to devise various curricula and teaching methods that meet students' interests and strengths. In addition, it is necessary to expand decision-making opportunities, such as participation and selection of students for problem solving through the provision of appropriate scaffolding (Vitto, 2003).

Finally, it is recommended that teachers provide meaningful opportunities for students to develop their own resilience by having them participate in and contribute to community activities. The National School Climate Council (2007) in the United States suggests the following as a way to promote effective teaching, learning and comprehensive school improvement (www.schoolclimate.org/climate/standards.php): ‘The school community develops meaningful and engaging practices, activities, and norms that promote social and civic responsibilities and commitment to social justice.’ Teachers can create such opportunities by allowing students to express their opinions freely on all issues in the classroom, allowing them to be creative and imaginative, and providing opportunities for community service or cooperation with peers. These strategies can consolidate student-class and student-school ties, provide practical opportunities to develop social skills, and reduce students’ possibilities of engaging in disruptive behaviours. This experience of participation and contribution to a bigger society can lead students to believe that ‘I am an important person who can contribute to society in a meaningful way’ by enhancing self-control ability and self-efficacy, which can facilitate the development of resiliency (Chu, 2015).

Study limitations

This study has some limitations due to the use of panel data. First, the relational factors were measured by the school unit, not class. Generally, it may be more appropriate to measure relationships with teachers and peers on a class-level basis, considering that elementary school life is mainly class-based. Also, the data included the problem of measurement, as not all of the variables are measured at every point. In particular, there was the limitation that student resilience was measured only at Time 1, which is at the same point as the relational factors. This undermines the reasoning of clear causal relationships on social relationships at schools and student resilience development. In addition, interpretation of the exact effects of teachers and peers on life satisfaction can be hampered. However, rather than the interpretation that student resilience as an individual trait would affect the climate shared by the students at the school, the interpretation that the atmosphere of the school may affect the individual’s cognitive, emotional and social development could be considered more reasonable. Furthermore, the assessment of the relational factors at school could have been more appropriate if measured in more progressive ways, such as using network-data rather than a survey.

Conclusions

The study suggests that the supportive and positive relationships with teachers collectively shared by students within schools can affect children’s self-elastic development and life satisfaction. This issue is interesting to researchers, and it has important implications for practitioners and educators. We believe that this and future studies on the quality of social relationships at school will be able to contribute to enriching every child’s life and their competencies for leading an adaptive life.

Ethics: informed consent obtained. All parents or guardians consented to children’s participation in the KCYPS.

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