

Adolescent Students' Perceived Social Support, Self-Concept and School Engagement

Estibaliz Ramos-Díaz, Arantzazu Rodríguez-Fernández, Arantza Fernández-Zabala, Lorena Revuelta, and Ana Zuazagoitia

University of the Basque Country (UPV/EHU)

Abstract

The study of school engagement is currently a topic of great interest in psychoeducational research, since it offers a new vision of students' development. The aim of this study is to analyze the relationship between perceived social support, general self-concept and school engagement. Participants were 1,250 students (49% boys; 51% girls) aged between 12 and 15 ($M = 13.72$, $SD = 1.09$), who were selected randomly for the sample group. The study tests a structural model for analyzing the effects of perceived social support and general self-concept on school engagement. The results provide evidence in favor of the influence of family and peer support on school engagement, through the mediating variable general self-concept. Support from teachers and family was found to have a direct influence on school engagement. The results are discussed within the framework of positive psychology, along with the implications for future research.

Keywords: perceived support from teachers, perceived support from peers, perceived support from families, self-concept, school engagement.

Resumen

El estudio de la implicación escolar constituye en la actualidad una temática de gran interés en el ámbito de la investigación psicoeducativa al aportar una renovada visión del desarrollo del alumnado. El objetivo de este estudio es analizar las relaciones entre apoyo social percibido, autoconcepto general e implicación escolar. Participaron 1.250 estudiantes (49% chicos; 51% chicas), de entre 12 y 15 años ($M = 13.72$, $DT = 1.09$), seleccionados aleatoriamente. Se somete a prueba un modelo estructural para analizar los efectos del apoyo social percibido y el autoconcepto general sobre la implicación escolar. Los resultados aportan evidencias a favor de la influencia que el apoyo familiar y el apoyo de los iguales ejercen sobre la implicación escolar a través del autoconcepto general como variable mediadora, mientras que el apoyo del profesorado y de la familia inciden directamente sobre la implicación escolar. Se discuten los resultados en el marco de la psicología positiva y las implicaciones para futuras investigaciones.

Palabras clave: apoyo percibido del profesorado, apoyo percibido del grupo de iguales, apoyo percibido de la familia, autoconcepto, implicación escolar.

Acknowledgement: The authors of this study form part of the Consolidated Research Group IT701-13, within the Basque University System. The study was conducted within the framework of the research project EHUA 15/15 at the University of the Basque Country.

Correspondence concerning this article should be addressed to Estibaliz Ramos-Díaz. Departamento de Psicología Evolutiva y de la Educación. Universidad del País Vasco, C/ Juan Ibañez de Sto. Domingo 1, 01006 Vitoria-Gasteiz. E-mail: estibaliz.ramos@ehu.eus

Introduction

The negative image of adolescence which prevailed in the field of education throughout the last century resulted in greater interest being shown in problematic behaviors and limitations than in research into and the fostering of adaptive, healthy behaviors (Oliva et al., 2010). Nevertheless, over recent years, those working in the field of educational psychology have increasingly preferred to study the positive qualities of adolescent students, rather than focus on their deficits (Froh, Huebner, Youssef, & Conte, 2011; Kristjánsson, 2012).

Of these qualities, school engagement is of vital importance for understanding positive development during adolescence (Li & Lerner, 2011), and has been identified as an index of adaptation in the school context (Libbey, 2004). It is also considered a key element for psychosocial development and academic success (Motti-Stefadini & Masten, 2013; Ros, Goikoetxea, Gairín, & Lekue, 2012). School engagement has been defined as the degree to which students are committed to school and are motivated to learn (Simons-Morton & Chen, 2009). The majority consensus within the scientific community acknowledges the multifaceted nature of the concept (Lewis, Huebner, Malone, & Valois, 2011; Wang, Willet, & Eccles, 2011), which is often divided into three di-

mensions: cognitive, emotional and behavioral (Appleton, 2012; Christenson, Reschly, & Wylie, 2012; Fredricks, Blumenfeld, & Paris, 2004; González & Paoloni, 2015). School engagement is therefore considered to involve the feelings, thoughts and behaviors manifested by students regarding their experiences in the school context (Veiga, Burden, Appleton, Taveira, & Galvao, 2014).

Recent research has provided empirical evidence indicating that psychological and environmental factors may influence school engagement (Christenson et al., 2012). The psychological variables involved include self-concept, understood as the set of perceptions that an individual has about him or herself, based on their own personal assessment and that of significant others (Shavelson, Hubner, & Stanton, 1976). Self-concept is vital to adolescent adjustment (Fuentes, García, Gracia, & Lila, 2011; Rodríguez-Fernández, Droguett, & Revuelta, 2012).

Over the course of the last decade, numerous studies have shown that self-concept is directly related to academic achievement (Marsh & Martin, 2011; Nagengast & Marsh, 2012; Preckel, Niepel, Schneider, & Brunner, 2013; Singh, Chang, & Dika, 2010). Less, however, is known about the role played by positive self-perceptions in school engagement. Some authors posit that self-concept is linked to educational variables such as students'

involvement in the learning process (Inglés, Martínez-Monteagudo, García-Fernández, Valle, & Castejón, 2014), while others go one step further to claim that school engagement may mediate between self-concept and academic achievement (Green et al., 2012).

One contextual variable that predicts adaptive behavior during adolescence is perceived social support (Chu, Saucier, & Hafner, 2010; Danielsen, Wium, Wilhemmsen, & Wold, 2010), understood as the individual's feeling that their social network provides adequate support in moments of need (Lakey & Scoboria, 2005). This concept is a complex one which encompasses a series of elements that interact and evolve throughout the course of adolescence (Cohen, 2004). The relationship between this environmental factor and adolescents' self-esteem is beyond any doubt (Marshall, Parker, Ciarrochi, & Heaven, 2014). In this sense, a close correlation has been found between family support and self-esteem (Salazar et al., 2004). It has also been observed that acceptance by one's peers has a global protective effect on general self-concept (Birkeland, Breivik, & Wold, 2014). Teachers' support and appraisal have been related to academic self-concept, which in turn is associated with academic achievement (Santana & García, 2011). Similarly, it has been found that adolescents who perceive a greater degree of support from their fam-

ily, peers and school environment have a better self-concept (Demaray, Malecki, Rueger, Brown, & Summers, 2009). Finally, evidence exists of the direct influence of student-teacher relations on school adjustment (García-Bacete, Coll, Casares, & Perrin, 2014), as well as the impact of the most personal environmental systems (family, peers, school) on students' engagement (Lam, Wong, Yang, & Lui, 2012).

In addition to the information reported regarding each of the study variables and their interrelations, empirical evidence also exists of the effect of social support on school engagement, with self-concept as a mediating variable of said effect (Fall & Roberts, 2012). Perhaps the most direct antecedents are those studies which demonstrate that self-concept mediates the relationship between context (support from teachers, peers and family) and school adaptation (Rodríguez-Fernández et al., 2012; Rodríguez-Fernández, Ramos-Díaz, Madariaga, Arribillaga, & Galende, 2016; Rodríguez-Fernández, Ramos-Díaz, Fernández-Zabala, Goñi, Esnaola, & Goñi, 2016; Tian, Liu, Huang, & Huebner, 2013). Specifically, Rodríguez-Fernández et al. (2012) measured family support and peer support, finding that only family support had a direct and indirect effect (mediated by self-concept) on school adjustment, whereas Tian et al. (2013) found that both family,

peer and teacher support affected self-concept, which in turn influenced school wellbeing. Whatever the case, there is no general agreement regarding what role peer support plays in school engagement, or what explanatory capacity perceived social support and self-concept may have in relation to that same variable. Moreover, despite the fact that the term school engagement is the most commonly accepted one today, no previous structural model has taken this var-

iable as the focus of its analysis, with all prior works using other related terms such as school adjustment or school wellbeing.

In light of this, the present study aims to test a structural model (Figure 1), in which school engagement during adolescence depends on general self-concept, with perceived social climate (support from teachers, peers and family) having a direct effect on this second variable and an indirect one on engagement.

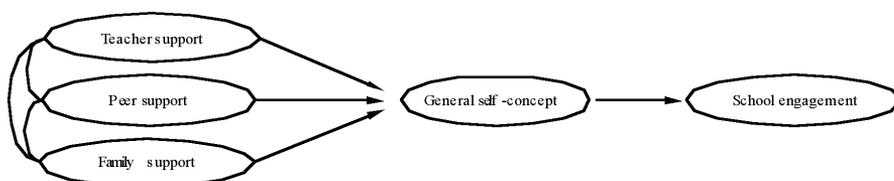


Figure 1. Proposed theoretical structural model.

Method

Participants

Participants were 1,250 secondary school students from the Autonomous Region of the Basque Country (ARBC) in Spain, who were selected using a random sampling technique. Of these, 612 (49%) were boys and 638 (51%) were girls. All were aged between 12 and 16 ($M = 13.72$; $SD = 1.09$). 9 schools were se-

lected (4 private and semi-private ones and 5 public ones) from mid-level socioeconomic and cultural environments. The distribution according to school year (Table 1) was as follows: 1st grade of secondary school, 232 (18.6%); 2nd grade, 271 (21.8%); 3rd grade, 353 (28.2%) and 4th grade, 393 (32.4%). Pearson's chi-squared test revealed no differences in the distribution of each sex between the different grades ($\chi^2_{(1)} = 4.66$, $p > .05$).

Table 1

Distribution of the Sample Group in Accordance with Educational Level and Sex

Sex	Educational level				Total
	1st grade secondary school	2nd grade secondary school	3rd grade secondary school	4th grade secondary school	
Male	114 (9.1%)	118 (9.4%)	182 (14.6%)	198 (15.8%)	612 (49.0%)
Female	118 (9.4%)	154 (12.3%)	171 (13.7%)	195 (15.6%)	638 (51.0%)
Total	232 (18.6%)	272 (21.8%)	353 (28.2%)	393 (31.4%)	1250 (100%)

Note. $\chi^2_{(1)} = 4.66, p > .05$.

Instruments

The *HBSC-2006 Questionnaire* (Moreno et al., 2008) comprises ten factors which measure behaviors related to the health and development of adolescent students. The *teacher support* scale used in this study comprises 8 items and has a 5-point Likert-type response scale ranging from (1) *totally agree* to (5) *totally disagree*. Satisfactory indexes were obtained in the confirmatory factor analysis (CFA), thus confirming the scale's unidimensionality: $\chi^2_{(18)} = 85.55, p < .001$; CFI = .979; TLI = .968; SRMR = .024; RMSEA = .055; RMSEA confidence interval 90% = .043-.067, with an internal consistency of .84, a composite reliability coefficient (CRC) of .88 and an average variance extracted (AVE) of .48.

The *Family and Friends Support Questionnaire* (AFA-R; González & Landero, 2014) consists of 15 statements which respondents rate on a 5-point Lik-

ert-type scale (1 = *never* to 5 = *always*). The CFA of the two-dimensional structure revealed an acceptable fit ($\chi^2_{(58)} = 433.00, p < .001$; CFI = .948; TLI = .930; SRMR = .045; RMSEA = .072; RMSEA confidence interval 90% = .066-.078), following the elimination recommended by the authors themselves of items 9 (*family support*: $\lambda = .300$; $t = 9.71, p < .01$) and 10 (*peer support*: $\lambda = .243$; $t = 9.32, p < .01$) and the incorporation of three error covariances justified by the semantic similarities detected in the drafting, with a change in the standardized parameter of .12, .23 and .21, respectively. The instrument has a high internal consistency index (.92) and in this study too, the internal consistency indexes obtained were acceptable: *family support* ($\alpha = .84$; CRC = .86; AVE = .48) and *peer support* ($\alpha = .82$; CRC = .83; VME = .46).

The *multidimensional self-concept questionnaire* (AUDIM; Fer-

nández-Zabala, Goñi, Rodríguez-Fernández, & Goñi, 2015) offers a 5-point Likert-type response scale ranging from (1) *false* to (5) *true*. It has an internal structure consisting of twelve factors, along with another factor for *general self-concept*. Only this last dimension was used for the analyses. It was found to have a good fit: $\chi^2_{(5)} = 20.15$, $p < .001$; CFI = .983; TLI = .966; SRMR = .021; RMSEA = .049; RMSEA confidence interval 90% = .028-.073. Although the authors report a general internal consistency of $\alpha = .77$, CRC = .83 and AVE = .50, in this study, the reliability indexes for the *general self-concept* dimension were $\alpha = .66$, CRC = .83 and AVE = .50.

The *School Engagement Questionnaire* (SEM; Fredericks, Blumenfeld, Friedel, & Paris, 2005) contains 19 items with a 5-point Likert-type response scale. It comprises three factors: *behavioral engagement*, *emotional engagement* and *cognitive engagement*. The CFA to which this three-dimensional structure was subjected revealed satisfactory fit indexes ($\chi^2_{(100)} = 676.93$, $p < .001$; CFI = .906; SRMR = .058; RMSEA = .068; RMSEA confidence interval 90% = .059-.069), following the elimination of three items due to low factor loading and the establishment of an error covariance with a change in the standardized parameter of .16. The questionnaire has an adequate internal consistency in all three factors,

with values of between .55 and .86 (Fredricks & McColskey, 2012), while in this study, the values found were: (a) *behavioral engagement*: $\alpha = .74$; CRC = .83; AVE = .55; (b) *emotional engagement*: $\alpha = .81$; CRC = .86; AVE = .55; and (c) *cognitive engagement*: $\alpha = .77$; CRC = .89; AVE = .53.

Procedure

A number of schools were randomly chosen from a list containing all schools in the ARBC, and the different year groups within each school were selected in accordance with the interests of the study. The management teams of the selected schools were contacted in order to explain the research project and ask for their voluntary cooperation. Two schools declined the invitation to collaborate in the project, and two new schools were selected to replace them, using the same method. The informed consent of the headmasters/mistresses and the participating families was obtained. None of the students refused to participate in the research project. The questionnaires were completed under the supervision of experienced researchers during class time. All students in the class completed the questionnaire at the same time, and the whole process took approximately half an hour. With the aim of mitigating the incidence of responses in keeping with the research hypothesis, the single blind criterion was employed. Both the confidenti-

ality of the responses given and the voluntary nature of the participation were guaranteed in order to reduce the effects of the social desirability bias. The study complied with the ethical values established for psychological research and assessment, and respected the basic principles laid out in the American Psychology Association's ethics code and in current regulations (informed consent and the right to information, protection of personal data and confidentiality guarantees, non-discrimination, non-remuneration and the right to withdraw from the study at any time).

Data analysis

Missing values (2.1%) were inferred using the expectation maximization (EM) algorithm and the Markov chain Monte Carlo (MCMC), offered by the LISREL 8.8 program. Extreme values (1.3%) were eliminated using the SAS program. To ensure normality, the bootstrap method was applied, as offered by the AMOS 21 program (with 2000 repetitions and establishing a confidence interval of 95%). This method assumes that the results of the estimations are robust and are therefore not affected by a lack of normality (Byrne, 2001).

The Structural Equation Modeling (SEM) technique was used to confirm the hypothesized model. The maximum likelihood method (ML) was used. The indexes of

fit taken into account were those proposed by Byrne (2001): chi-squared (χ^2) and level of associated probability, CFI (*Comparative Fit Index*), TLI (*Tucker-Lewis Index*) (Barret, 2007), RMSEA (*Root Mean Square Error of Approximation*), with its confidence interval, and SRMR (*Standardized Root Mean Square Residual*) (Hu & Bentler, 1999), and the chi-squared test was included also to compare the estimated models.

Results

Descriptive statistics and correlations between the study variables

Prior to the analysis of the structural regression model, a Pearson correlation analysis was conducted, along with an analysis of the means and standard deviations. It should be noted (Table 2) that the level of *behavioral engagement* was low and the highest level recorded was for *family support*. With $p < .01$ or $p < .05$, significant interrelations were observed between all the variables except *cognitive engagement* and both *peer support* ($r = .035, p > .05$) and *support from teachers* ($r = .324, p > .05$). The highest direct interrelations were found between *behavioral engagement* and *emotional engagement* ($r = .485, p < .01$), as well as between *support from teachers* and *emotional engagement* ($r = .447, p < .01$).

Table 2

Means, Standard Deviations, Reliability and Bivariate Correlations between the Study Variables

Variables	1	2	3	4	5	6	7
1. SSF	1	.343**	.322**	.350**	.298**	.328**	.260**
2. SSP		1	.343**	.230**	.065*	.224**	.035
3. SST			1	.209**	.326**	.447**	.324
4. GSC				1	.249**	.345**	.160**
5. BSE					1	.485**	.390**
6. ESE						1	.429**
7. CSE							1
M	33.04	28.32	26.40	20.25	19.30	21.82	22.84
SD	5.07	4.47	5.87	3.37	2.93	4.03	5.70
Alfa	.84	.82	.84	.66	.74	.81	.77
CFC	.83	.86	.88	.83	.83	.86	.89
AVE	.46	.48	.48	.50	.55	.55	.53

Note. * $p < .05$; ** $p < .01$. SSF = Social support from the family; SSP = Social support from peers; SST = Social support from teachers; GSC = General self-concept; BSE = Behavioral school engagement; ESE = Emotional school engagement; CSE = Cognitive school engagement; CRC = Composite reliability coefficient; AVE = Average variance extracted.

Global fit of the proposed model

The complete structural regression model tested here contains 5 latent variables whose indicators, in the case of the social support variables (*family support, peer support and support from teachers*) and *general self-concept*, are those items of the scales in the corresponding test. In the case of the school engagement variables (*behavioral engagement, emotional engagement and cognitive engagement*), the indicators are the scores obtained by participants in the different scales (parcels).

Two models were compared: the hypothesized model of complete

mediation between social support and school engagement through general self-concept, and an alternative model which also includes direct pathways from the dimensions of social support to school engagement. The initial hypothetical model (Figure 1) posits that social support is positively related to general self-concept, which in turn has predictive power over school engagement and acts as a mediator between the three sources of social support and the school adaptation indicator. An initial analysis of the resulting parameters indicated that the initial model (Figure 2) has an acceptable fit: $\chi^2_{(367)} = 1646.80$, $p < .001$; CFI = .903; TLI = .835;

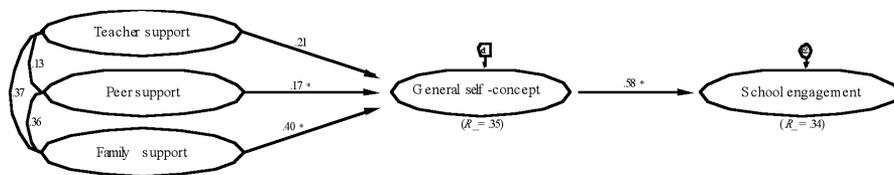


Figure 2. Standardized solution of the hypothesized structural model.

SRMR = .062; RMSEA = .053; RMSEA confidence interval 90% = .050-.055).

In addition to positing the indirect effect of contextual factors on school adjustment through *general self-concept*, the alternative model (Figure 3) also includes a series of direct pathways from the different dimensions of social support to school engagement. The goodness of fit indicators obtained are within accepted margins, thus suggesting a reasonable global fit ($\chi^2_{(364)} = 1399.81$, $p < .001$; CFI = .921; TLI = .912; SRMR = .044; RMSEA = .049; RMSEA confidence interval 90% = .045-.050).

Taking the difference between the two models as degrees of freedom, the chi-squared test on the discrepancy proved statis-

tically significant ($\chi^2_{(3)} = 246.99$, $p < .05$), indicating that the two models are significantly different. This was also confirmed by the cross-validation index (ECVI). When studying the goodness of fit indexes of the tested models (Table 3), it was observed that both the hypothesized model (M_1) and the alternative model (M_2) provided acceptable results, with the alternative model having the better fit. It is therefore this model that constitutes the first choice for explaining school engagement on the basis of social support and general self-concept. According to the ECVI, the alternative model (M_2) is the one that presents a better degree of replicability, since it has a lower value in this index than the complete mediation model (M_1).

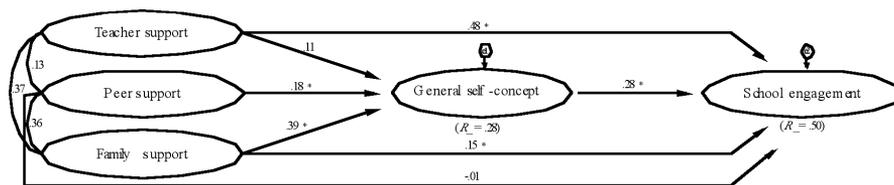


Figure 3. Standardized solution of the alternative model.

Table 3

Goodness of Fit Parameters for the Hypothesized and Alternative Models

Model	$\chi^2_{(gl)}$	CFI	TLI	SRMR	RMSEA _(IC)	ECVI _(IC)
M ₁	1646.80 ₍₃₆₇₎	.903	.893	.062	.053 _(.050-.055)	1.43 _(1.33-1.53)
M ₂	1399.81 ₍₃₆₄₎	.921	.912	.044	.049 _(.045-.050)	1.23 _(1.15-1.33)
$\Delta M_1 - M_2$	246.99 ₍₃₎					

Note. M₁ = Hypothesized model; M₂ = Alternative model; CFI and TLI >.90 (acceptable fit); RMSEA and SRMR < .05 (good fit) or .05 ≥ .08 (acceptable fit).

Direct and indirect effects between the study variables

If the alternative model's regression coefficients are analyzed individually (Table 4), it becomes clear that the majority of the direct pathways proposed obtained significance level ($p < .05$), with the exception of the *support from teachers-general self-concept* and the *peer support-school engagement* pairs. Thus, family and peer support were found to have a predictive capacity of 28% in relation to *general self-concept*, with *family support* being the contextual variable with the greatest predictive power ($\beta = .389, p < .05$). School engagement is directly explained by *general self-concept* ($\beta = .278, p < .05$), *family support* ($\beta = .153, p < .05$) and *support from teachers* ($\beta = .480, p < .05$).

As regards the standardized indirect effects on the school adjustment indicator, *family* and *peer support* were found to have a sig-

nificant indirect effect mediated by *general self-concept*. If we compare these two types of social support (family and peer), we see that the one with the greatest indirect predictive power in relation to school engagement is *family support* ($\beta = .108, p < .01$).

In short, the most relevant findings are, firstly, that *family support* and *peer support* are associated indirectly with school engagement through *general self-concept*. However, when the interaction between the two variables is taken into consideration, the effect of *peer support* is notably reduced in comparison with that of *family support*. It therefore appears that the mediating function of *general self-concept* on school engagement is more important when this psychological variable is influenced by *family support*. The second relevant finding is that, when all three sources of social support are analyzed together, the effect of *support from teachers* on school en-

Table 4
Standardized Direct and Indirect Effects between the Study Variables

	Standardized Beta
Direct effects	
Family support → General self-concept	.389**
Peer support → General self-concept	.177**
Teacher support → General self-concept	.115
General self-concept → School engagement	.278**
Family support → School engagement	.153**
Peer support → School engagement	.009
Teacher support → School engagement	.480**
Indirect effects	
Family support → General self-concept → School engagement	.108**
Peer support → General self-concept → School engagement	.049**
Teacher support → General self-concept → School engagement	.032

Note. ** $p < .01$. R^2 (General self-concept) = .28; R^2 (School engagement) = .50.

agement was not observed to be mediated by *general self-concept*, yet this support is closely related to school adjustment and is indeed the factor which has the greatest direct effect on this indicator. It can therefore be affirmed that *family* and *peer support* activate *general self-concept* ($R^2 = .281$) as a mediator variable which in turn has a direct effect, along with *support from teachers* and family, on school engagement ($R^2 = .499$).

Discussion

In addition to providing academic training, the purpose of the education system is to foster students' personal and social adjust-

ment. Specifically, the active engagement of adolescent students in the school environment is a key protective factor which promotes their adaptive development as competent members of society (Li & Lerner, 2011; Van Acker & Wheby, 2000). Although the relationship between academic achievement and school engagement has yet to be fully clarified (Zimmer-Gembeck, Chipuer, Hanisch, Creed, & McGregor, 2006), some studies assert that this latter variable fosters academic success since it encourages and promotes social-personal adjustment (Li & Lerner, 2011; Van Acker & Wheby, 2000). The ability of some schools to foster their students' positive development has had a strong impact on

the field of psychoeducational research, which has recently shifted its focus from the problems and deficits of adolescents to the study of school adjustment. Based on the ecological model (Bronfenbrenner, 2005) and positive psychology (Seligman & Csikszentmihalyi, 2014), this study empirically tested a structural regression model in which social support (*support from teachers, peer support and family support*) and general self-concept influence school engagement, understood as an index of adaptation within the school environment.

The results reveal that family support and support from teachers have a direct effect on school engagement, while family support and peer support affect it indirectly through general self-concept. Family support was found to have a greater impact than peer support on general self-concept, as well as a greater indirect influence on school engagement. However, the closest relationship was found between support from teachers and school engagement, while for its part, general self-concept was observed to be a decisive psychological factor in students' engagement with their school environment during adolescence. Evidence was also found of the mediating role played by general self-concept between adolescents' social-family context and their school adjustment. If we compare the weight of the different factors included in the model, it

becomes clear that school engagement is mainly determined by the variables support from teachers and general self-concept.

Students' adaptation depends, to a large extent, on the interaction between the individual and environmental characteristics of the context in which they live. Within this context, several authors have highlighted the importance of the most personal environmental systems, including family, peers and school (Estell & Perdue, 2013), in adolescents' school engagement (Lam et al., 2012). Thus, previous studies (Rodríguez-Fernández et al., 2012; Tian et al., 2013) have demonstrated the importance of family support and support from teachers in students' adaptation (school engagement and/or wellbeing), through self-perceptions. Nevertheless, an agreement has yet to be reached regarding the role played by peers in this process, since while some authors find that they have no influence whatsoever (Rodríguez et al., 2012), others have reported significant results (Tian et al., 2013). The findings of the present study partly confirm these results since (a) they corroborate the important mediating role played by general self-concept in the indirect influence of social support on school engagement; (b) they shed light on the different impact had by family, peers and teachers on school adjustment; (c) they confirm that family and peers influence school engagement through general self-

concept; and finally, and perhaps most importantly, (d) they fail to observe an indirect effect of support from teachers on school engagement through self-perceptions, meaning that all the influence of this social variable is direct, rather than mediated.

The results of this present study have interesting educational implications. One of the most important ones refers to the crucial relationship between teachers and students. Although family and peer support are significant, the results of this study suggest that teachers have the greatest impact on students' school engagement at secondary level, which is why it is vital to foster psychoeducational interventions aimed at promoting positive teacher-student relations. The second implication refers to the mediating role of general self-concept between adolescents' family and social contexts and their school adjustment. The fact that this intra-individual variable depends on social support systems and in turn has a key impact on school engagement points to the need for both schools and families to provide adolescences with a good social support network in order to ensure their adequate psychological functioning. Moreover, it is also important to foster positive self-perception and acceptance of oneself during secondary school education.

The study has a number of limitations. Firstly, the results presented refer to students aged between 12

and 15, which means that the results cannot be generalized to populations outside this age range and educational stage. Moreover, given the wide variations found in accordance with age in relation to self-concept-school motivation (Veiga, García, Reeve, Wentzel, & García, 2015), future research should try to analyze how the variables studied affect school engagement in different age groups and educational levels. Longitudinal studies are also required in order to specify the direction of the relationships which exist between the variables studied, including the mediating effect of general self-concept. With the aim of enabling the results to be generalized more widely and subjecting the model obtained to stricter testing, future research may wish to use a multi-sample analysis contemplating different years in Compulsory Secondary Education. This type of design will provide information about the weight of family and peer support in each sample group analyzed. Finally, future research could shed further light on the results obtained in this study by including other psychological variables, such as emotional intelligence or resilience, which have been linked to positive adolescent development, in their analyses, along with objective variables of academic achievement which, in conjunction with the self-report measure of student engagement, would provide a much more comprehensive analysis of school adjustment.

References

- Appleton, J. J. (2012). Systems consultation: Developing the assessment-to-intervention link with the Student Engagement Instrument. In S. L. Christenson, A. L. Reschly, C. Wylie, S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 725-741). New York, NY, US: Springer. doi: 10.1007/978-1-4614-2018-7_35
- Barrett, P. (2007). Structural equation modeling: Adjudging model fit. *Personality and Individual Differences*, 42(5), 815-824. doi: 10.1016/j.paid.2006.09.018
- Birkeland, M. S., Breivik, K., & Wold, B. (2014). Peer acceptance protects global self-esteem from negative effects of low closeness to parents during adolescence and early adulthood. *Journal of Youth and Adolescence*, 43(1), 70-80. doi: 10.1007/s10964-013-9929-1
- Bronfenbrenner, U. (2005). The bioecological theory of human development. In U. Bronfenbrenner (Ed.), *Making human beings human: Bioecological perspectives on human development* (pp. 3-15). Thousand Oaks, CA: Sage Publications Ltd.
- Byrne, B. M. (2001). Structural equation modeling with AMOS, EQS, and LISREL: Comparative approaches to testing for the factorial validity of a measuring instrument. *International Journal of Testing*, 1(1), 55-86. doi: 10.1207/S15327574IJT0101_4
- Christenson, S. L., Reschly, A. L., & Wylie, C. (2012). *Handbook of research on student engagement*. New York, NY, US: Springer Science. doi: 10.1007/978-1-4614-2018-7
- Chu, P. S., Saucier, D. A., & Hafner, E. (2010). Meta-analysis of the relationships between social support and well-being in children and adolescents. *Journal of Social and Clinical Psychology*, 29(6), 624-645. doi: 10.1521/jscp.2010.29.6.624
- Cohen, S. (2004). Social relationships and health. *American Psychologist*, 59(8), 676-684. doi: 10.1037/0003-066X.59.8.676
- Danielsen, A. G., Wium, N., Wilhelmsen, B. U., & Wold, B. (2010). Perceived support provided by teachers and classmates and students' self-reported academic initiative. *Journal of School Psychology*, 48(3), 247-267. doi: 10.1016/j.jsp.2010.02.002
- Demaray, M., Malecki, C., Rueger, S., Brown, S. E., & Summers, K. (2009). The role of youth's ratings of the importance of socially supportive behaviors in the relationship between social support and self-concept. *Journal of Youth and Adolescence*, 38(1), 13-28. doi: 10.1007/s10964-007-9258-3
- Estell, D. B., & Perdue, N. H. (2013). Social support and behavioral and affective school engagement: The effects of peers, parents, and teachers. *Psychology in the Schools*, 50(4), 325-339. doi: 10.1002/pits.21681
- Fall, A., & Roberts, G. (2012). High school dropouts: Interactions between social context, self-perceptions, school engagement, and student dropout. *Journal of Adolescence*, 35(4), 787-798. doi: 10.1016/j.adolescence.2011.11.004
- Fernández-Zabala, A., Goñi, E., Rodríguez-Fernández, A., & Goñi, A. (2015). Un nuevo cuestionario en castellano con escalas de las dimen-

- siones del autoconcepto. *Revista Mexicana de Psicología*, 32(2), 149-159.
- Fredricks, J. A., Blumenfeld, P. C., Friedel, J., & Paris, A. (2005). School engagement. In K. A. Moore & L. Lippman (Eds.), *Conceptualizing and measuring indicators of positive development: What do children need to flourish* (pp. 305-321). New York: Kluwer Academic/Plenum Press.
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59-109. doi: 10.3102/00346543074001059
- Fredricks, J. A., & McColskey, W. (2012). The measurement of student engagement: A comparative analysis of various methods and student self-report instruments. In S. L. Christenson, A. L. Reschly, C. Wylie, S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 763-782). New York, NY, US: Springer Science + Business Media. doi: 10.1007/978-1-4614-2018-7_37
- Froh, J. J., Huebner, E. S., Youssef, A., & Conte, V. (2011). Acknowledging and appreciating the full spectrum of the human condition: School psychology's (limited) focus on positive psychological functioning. *Psychology in the Schools*, 48(2), 110-123. doi: 10.1002/pits.20530
- Fuentes, M. C., García, J., Gracia, E., & Lila, M. (2011). Autoconcepto y ajuste psicosocial en la adolescencia. *Psicothema*, 23(1), 7-12.
- García-Bacete, F. J. G., Coll, P. F., Casares, M. I. M., & Perrin, G. M. (2014). Las relaciones del profesorado con el alumnado en aulas del ciclo inicial de Educación Primaria. Adaptación del Questionnaire on Teacher Interaction-Early Primary (QTI-EP). *Revista de Psicodidáctica*, 19(1), 211-231. doi:10.1387/RevPsicodidact.9081
- González, M., & Landero, R. (2014). Propiedades psicométricas de la escala de Apoyo Social Familiar y de Amigos (AFA-R) en una muestra de estudiantes. *Acta de Investigación Psicológica*, 4(2), 1469-1480. doi: 10.1016/S2007-4719(14)70387-4
- González, A., & Paolini, P. (2015). Implicación y rendimiento en Física: el papel de las estrategias docentes en el aula, y el interés personal y situacional. *Revista de Psicodidáctica*, 20(1), 25-45. doi: http://10.1387/RevPsicodidact.11370
- Green, J., Liem, G. D., Martin, A. J., Colmar, S., Marsh, H. W., & McInerney, D. (2012). Academic motivation, self-concept, engagement, and performance in high school: Key processes from a longitudinal perspective. *Journal of Adolescence*, 35(5), 1111-1122. doi: 10.1016/j.adolescence.2012.02.016
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1-55. doi: 10.1080/10705519909540118
- Inglés, C., Martínez-Monteagudo, M., García-Fernández, J., Valle, A., & Castejón, J. (2015). Perfiles de orientaciones de metas y autoconcepto de estudiantes de Educación Secundaria. *Revista de Psicodidáctica*, 20(1), 99-116. doi: 10.1387/RevPsicodidact.1023
- Kristjánsson, K. (2012). Positive psychology and positive education: Old wine in new bottles?. *Educational*

- Psychologist*, 47(2), 86-105. doi: 10.10080/00461520.2011.610678
- Lakey, B., & Scoboria, A. (2005). The relative contribution of trait and social influences to the links among perceived social support, affect, and self-esteem. *Journal of Personality*, 73(2), 361-388. doi: 10.1111/j.1467-6494.2005.00312.x
- Lam, S., Wong, B. H., Yang, H., & Liu, Y. (2012). Understanding student engagement with a contextual model. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 403-419). New York, NY US: Springer Science. doi: 10.1007/978-1-4614-2018-7_19
- Lewis, A. D., Huebner, E., Malone, P. S., & Valois, R. F. (2011). Life satisfaction and student engagement in adolescents. *Journal of Youth and Adolescence*, 40(3), 249-262. doi: 10.1007/s10964-010-9517-6
- Li, Y., & Lerner, R. M. (2011). Trajectories of school engagement during adolescence: Implications for grades, depression, delinquency, and substance use. *Developmental Psychology*, 47(1), 233-247. doi: 10.1037/a0021307
- Libbey, H. P. (2004). Measuring students' relationship to school: Attachment, bonding, connectedness, and engagement. *Journal of School Health*, 74, 274-283. doi: 10.1111/j.1746-1561.2004.tb08284.x
- Marsh, H. W., & Martin, A. J. (2011). Academic self-concept and academic achievement: Relations and causal ordering. *British Journal of Educational Psychology*, 81(1), 59-77. doi: 10.1348/000709910X503501
- Marshall, S. L., Parker, P. D., Ciarrochi, J., & Heaven, P. L. (2014). Is self-esteem a cause or consequence of social support? A 4-year longitudinal study. *Child Development*, 85(3), 1275-1291. doi: 10.1111/cdev.12176
- Moreno, C., Muñoz-Tinoco, V., Pérez, P., Sánchez-Queija, I., Granado M. C., Ramos, P., & Rivera, F. (2008). *Desarrollo adolescente y salud. Resultados del Estudio HBSC-2006 con chicos y chicas españoles de 11 a 17 años*. Madrid: Ministerio de Sanidad y Consumo.
- Motti-Stefanidi, F., & Masten, A. S. (2013). School success and school engagement of immigrant children and adolescents: A risk and resilience developmental perspective. *European Psychologist*, 18(2), 126-135. doi: 10.1027/1016-9040/a000139
- Nagengast, B., & Marsh, H. W. (2012). Big fish in little ponds aspire more: Mediation and cross-cultural generalizability of school-average ability effects on self-concept and career aspirations in science. *Journal of Educational Psychology*, 104(4), 1033-1053. doi: 10.1177/0022022113519858
- Oliva, A., Ríos, M., Antolín, L., Parra, Á., Hernando, Á., & Pertegal, M. (2010). Más allá del déficit: Construyendo un modelo de desarrollo positivo adolescente. *Infancia y Aprendizaje*, 33(2), 223-234. doi: 10.1174/021037010791114562
- Preckel, F., Niepel, C., Schneider, M., & Brunner, M. (2013). Self-concept in adolescence: A longitudinal study on reciprocal effects of self-perceptions in academic and social domains. *Journal of Adolescence*, 36(6), 1165-1175. doi: 10.1016/j.adolescence.2013.09.001
- Rodríguez-Fernández, A., Droguett, L., & Revuelta, L. (2012). Ajuste esco-

- lar y personal en la adolescencia: El papel del autoconcepto académico y del apoyo social percibido. *Revista de Psicodidáctica*, 17(2), 397-414. doi: 0.1387/Rev.Psicodidact.3002
- Rodríguez-Fernández, A., Ramos-Díaz, E., Madariaga, J. M., Arribillaga, A., & Galende, N. (2016). Steps in the construction and verification of an explanatory model of psychosocial adjustment. *European Journal of Education and Psychology*, 9(1), 20-28. doi: 10.1016/j.ejeps.2015.11.002
- Rodríguez-Fernández, A., Ramos-Díaz, E., Fernández-Zabala, A., Goñi, E., Esnaola, I., & Goñi, A. (2016). Contextual and psychological variables in a descriptive model of subjective well-being and school engagement. *International Journal of Clinical and Health Psychology*, 16(2), 166-174. doi: 10.1016/j.ijchp.2016.01003
- Ros, I., Goikoetxea, J., Gairín, J., & Leque, P. (2012). Implicación del alumnado en la escuela: diferencias interindividuales e intercentros. *Revista de Psicodidáctica*, 17(2), 291-307. doi: 10.1387/Rev.Psicodidact.4496
- Salazar, L. F., DiClemente, R. J., Wingood, G. M., Crosby, R. A., Harrington, K., Davies, S., ...Oh, M. K. (2004). Self-concept and adolescents' refusal of unprotected sex: A test of mediating mechanisms among african american girls. *Prevention Science*, 5(3), 137-149. doi: 10.1023/B:PREV.0000037638.20810.01
- Santana, L. E., & García, L. F. (2011). Parent's and teacher's perceived support, self-concept and decision making in high school students. *Revista de Educación*, 334, 493-519. doi: 10-4438/1988-592x-RE-2011-355-034
- Seligman, M. E., & Csikszentmihalyi, M. (2014). Positive psychology: An introduction. In M. Csikszentmihalyi (Ed.), *Flow and the foundations of positive psychology* (pp. 279-298). New York, NY, US: Springer Science+Business Media. doi: 10.1007/978-94-017-9028-8_18
- Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of Educational Research*, 46(3), 407-441. doi: 10.2307/1170010
- Simons-Morton, B., & Chen, R. (2009). Peer and parent influences on school engagement among early adolescents. *Youth and Society*, 41(1), 3-25. doi: 10.1177/0044118X09334861
- Singh, K., Chang, M., & Dika, S. (2010). Ethnicity, self-concept, and school belonging: Effects on school engagement. *Educational Research for Policy and Practice*, 9(3), 159-175. doi: 10.1007/s10671-010-9087-0
- Tian, L., Liu, B., Huang, S., & Huebner, E. S. (2013). Perceived social support and school well-being among Chinese early and middle adolescents: The mediational role of self-esteem. *Social Indicators Research*, 113(3), 991-1008.
- Van Acker, R. V., & Wehby, J. H. (2000). Exploring the social contexts influencing student success or failure: Introduction. *Preventing School Failure: Alternative Education for Children and Youth*, 44(3), 93-96.
- Veiga, F. H., Burden, R., Appleton, J., Taveira, M. D. C., & Galvao, D. (2014). Envolvimiento de los estudiantes en la escuela: conceptualización y relaciones con variables personales y rendimiento académico.

- Una revisión de la literatura. *Revista de Psicología y Educación*, 9(1), 29-47.
- Veiga, F. H., García, F., Reeve, J., Wentzel, K., & García, O. (2015). When adolescents with high self-concept lose their engagement in school. *Revista de Psicodidáctica*, 20(2), 305-320. doi: 10.1387/RevPsicodiact.12671
- Wang, M. T., Willett, J. B., & Eccles, J. S. (2011). The assessment of school engagement: Examining dimensionality and measurement invariance by gender and race/ethnicity. *Journal of School Psychology*, 49(4), 465-480. doi: 10.1016/j.jsp.2011.04.001
- Zimmer-Gembeck, M. J., Chipuer, H. M., Hanisch, M., Creed, P. A., & McGregor, L. (2006). Relationships at school and stage-environment fit as resources for adolescent engagement and achievement. *Journal of Adolescence*, 29(6), 911-933. doi: 10.1016/j.adolescence.2006.04.008

Estibaliz Ramos-Díaz. Doctor of Psychology and lecturer at the Department of Developmental and Educational Psychology at the University of the Basque Country. Her research activities focus on psychosocial adjustment associated with diverse psychological and contextual variables.

Arantzazu Rodríguez-Fernández. Doctor of Psychology (winner of the extraordinary prize for her doctoral thesis) and lecturer at the Department of Developmental and Educational Psychology at the University of the Basque Country. Her research mainly focuses on the multidimensional nature of self-concept, as well as on its relationship with psychological adjustment variables.

Arantza Fernández-Zabala. Doctor of Psychology and lecturer at the Department of Developmental and Educational Psychology at the University of the Basque Country. Her research activities focus on self-concept, particularly on its social dimension and its relationship with school adjustment.

Ana Zuazagoitia Rey-Baltar. Doctor of Physical Activity and Sports Science and lecturer at the Department of Musical, Plastic and Bodily Expression Teaching at the University of the Basque Country. Her research focuses on school engagement, physical activity, physical education and health.

Lorena Revuelta-Revuelta. Doctor of Psychodidactics and lecturer at the Department of Developmental and Educational Psychology at the University of the Basque Country. Her research includes self-concept, student expectations and motivation and psychosocial adjustment.

Received date: 15-09-2015

Review date: 09-02-2016

Accepted date: 17-03-2016