

## The role of social support in school adjustment during Secondary Education

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### Abstract

**Background:** During secondary education, a stage with a high risk of failure and school dropout, social support is an important contextual variable for the prevention of school maladjustment. The aim of this study is to examine a theoretical model of the explanatory capacity of social support in terms of school adjustment, understood as school engagement and perceived academic performance. **Method:** Participants were 1,468 students (51% girls; 49% boys) from the Basque Country, aged between 12 and 17 ( $M=14.03$ ,  $SD=1.36$ ). The study had an ex post facto cross-sectional design. The measurement instruments used were: TCMS –teacher support subscale, AFA-R –family support and peer support subscales, SEM –School Engagement Measure, and EBAE-10 - perceived academic performance subscale. Various different structural models were tested. **Results:** The first-choice model was one in which social support predicts school engagement with perceived academic performance as a mediating variable: together, both variables predict 73% of school engagement. The strongest effect was that of teacher support, followed by family support, whereas friends were not found to have any direct effect on school adjustment variables. **Conclusions:** Teachers and families should strive to offer social support to students as a means of strengthening perceived academic self-efficacy and school engagement.

**Keywords:** Perceived social support, school engagement, perceived academic performance, Secondary Education.

### Resumen

*El papel del apoyo social en el ajuste escolar en Educación Secundaria.*

**Antecedentes:** durante la Educación Secundaria, etapa con riesgo de fracaso y abandono escolar, el apoyo social representa una variable contextual relevante para prevenir el desajuste escolar. El objetivo de este trabajo es examinar un modelo teórico sobre la capacidad explicativa del apoyo social sobre el ajuste escolar –implicación escolar y rendimiento académico percibido–. **Método:** participan 1.468 estudiantes (51% chicas; 49% chicos) con edades entre 12 y 17 años ( $M=14.03$ ;  $DT=1.36$ ) del País Vasco. Es un estudio con diseño ex post facto transversal. Las medidas empleadas son: TCMS –subescala apoyo profesorado–, AFA-R –subescalas apoyo familiar y apoyo amistades–, SEM –escala implicación escolar– y EBAE-10 –subescala rendimiento académico percibido–. Se comprueban varios modelos estructurales. **Resultados:** el modelo de primera elección es el de predicción del apoyo social sobre la implicación escolar con el rendimiento académico percibido como variable mediadora: predicen conjuntamente un 73% de la implicación y prevalece el efecto del apoyo del profesorado, seguido del apoyo familiar, frente a la ausencia de efecto directo de amistades sobre las variables de ajuste escolar. **Conclusiones:** el profesorado y la familia deben ofrecer apoyo social al alumnado para reforzar la percepción de autoeficacia académica y la implicación escolar.

**Palabras clave:** apoyo social percibido, implicación escolar, rendimiento académico percibido, Educación Secundaria.

In order to be considered high-quality, an education system should be effective in both imparting academic knowledge and fostering students' acquisition of social and personal skills that contribute to optimum school functioning and enable them to successfully cope with future developmental tasks. This expanded role, coupled with the recent focus on the need for schools to act as agents for promoting wellbeing, has resulted in a growing body of research into school adjustment and associated variables (Slemp et al., 2017), with particular attention being paid to adolescent students' strengths.

One of the key strengths that foster positive adaptation in the school environment is school engagement, defined as students' feelings of connectedness with their school (Veiga, 2016). Most authors recognize the three-dimensional nature of this variable (Ros & Zuazagoitia, 2015), which comprises the behavioral (student's participation in academic activities), emotional (their feelings towards the school context) and cognitive dimensions (investment and effort in learning) (Fredricks, Blumenfeld, & Paris, 2004). This variable has also been found to be related to environmental factors, such as social support, as well as to other indicators of school adjustment, such as academic performance (Moreira & Dias, 2018; Virtanen et al., 2018).

As an indicator of school adjustment, academic performance (Rodríguez-Fernández, Ramos-Díaz, & Axpe, 2018) has generally been represented as the quantitative mean of the grades obtained by the student in different subjects (Imose & Barber, 2015). Nevertheless, it can also be measured using qualitative data based

on perceived assessments, which is the conceptual basis used in this study. However it is measured, performance should be understood as a dynamic and multi-causal phenomenon influenced by many different contextual and personal factors (Lee & Shute, 2010).

One of the main contextual variables linked to school adjustment is perceived social support, understood as the information perceived by an individual which makes them feel cared for, valued, loved and part of a social network with shared responsibilities (Cobb, 1976), in which the subjective perception of and satisfaction with the available support is important (Sarason, Levine, Basham, & Sarason, 1983). Evidence exists of the influence of those contextual systems closest to the student, such as family, peers and school, which are all particularly important during this developmental stage and are vital to ensuring good adjustment (Hombrados-Mendieta, Gómez-Jacinto, Domínguez-Fuentes, García-Leiva, & Castro-Travé, 2012).

In terms of the relationship between social support and the first dimension of school adjustment, it has been found that support from teachers and family influences students' school engagement (Wang & Fredricks, 2014). Students' perception of being supported by teachers correlates positively with and predicts engagement (Fernández-Zabala, Goñi, Camino, & Zulaika, 2016; Rodríguez-Fernández et al., 2016). The second strongest association is found between engagement and family support (Fernández-Lasarte, Goñi, Camino, & Ramos-Díaz, 2019), while for support from friends the data are inconclusive, with some studies failing to find any direct effect (Gutiérrez, Tomás, Romero, & Barrica, 2017; Ramos-Díaz, Rodríguez-Fernández, Fernández-Zabala, Revuelta, & Zuazagoitia, 2016) and others reporting a negative one (Fernández-Zabala et al., 2016; Rodríguez-Fernández, Ramos-Díaz, Ros, & Zuazagoitia, 2018). Similarly, some studies have found that teacher support predicts school engagement among adolescents, although no effect was observed for family support or support from friends (Kozan, Di Fabio, Blustein, & Kenny, 2014), whereas others report an effect of both teacher and peer support in this sense (Wang & Eccles, 2013).

Much the same occurs with academic performance. While the strongest effects have been found in relation to teacher and family support (Moreira, Dias, Vaz, & Vaz, 2013), studies analyzing all three different sources of social support together report differing results, with some finding that the effect of social support by teachers is stronger than that of families and friends (Cirik, 2015); others that family support is the strongest predictor, followed by teacher support, while peer support has no explanatory power in terms of academic performance (Song, Bong, Lee, & Kim, 2015); and others observing a negative effect of friends on academic performance (Lam et al., 2012). This inconsistency in relation to the influence of friends may be due to the fact that friendship groups do not always coincide with the peer group in the school context, and even when the two groups do overlap (both inside and out of the school context), this source of support may not always have a direct or positive effect on school behavior variables, but rather on other types of variables, such as emotional ones, for example (Oliva, Parra, & Sánchez-Queija, 2002). Therefore, the exact nature of the effect of perceived social support on school adjustment variables has yet to be clarified, particularly in relation to friends.

As regards the directionality of the effect of school adjustment variables (engagement and performance) on each other, no consensus has yet been reached. Most studies view school engagement as

a predictor of academic performance (Lam et al., 2012; Oriol-Granado, Mendoza-Lira, Covarrubias-Apablaza, & Molina-López, 2017; Ramos-Díaz, Rodríguez-Fernández, & Revuelta, 2016), either based exclusively on the behavioral component (Froiland & Worrell, 2016; González, Paoloni, Donolo, & Rinaudo, 2015), or taking into account behavioral and cognitive engagement (Van Rooij, Jansen, & Van de Grift, 2017) or all three dimensions (Ramos-Díaz, Rodríguez-Fernández, & Revuelta, 2016). Nevertheless, other authors claim that the influence is reversed, with academic performance predicting school engagement during secondary education (Li et al., 2017; Mikami, Ruzek, Hafen, Gregory, & Allen, 2017; Wang, Chow, Hofkens, & Salmela-Aro, 2011). Finally, only one study has reported that students' perceptions of their own academic performance influence their engagement (Ramos-Díaz, Rodríguez-Fernández, & Revuelta, 2016).

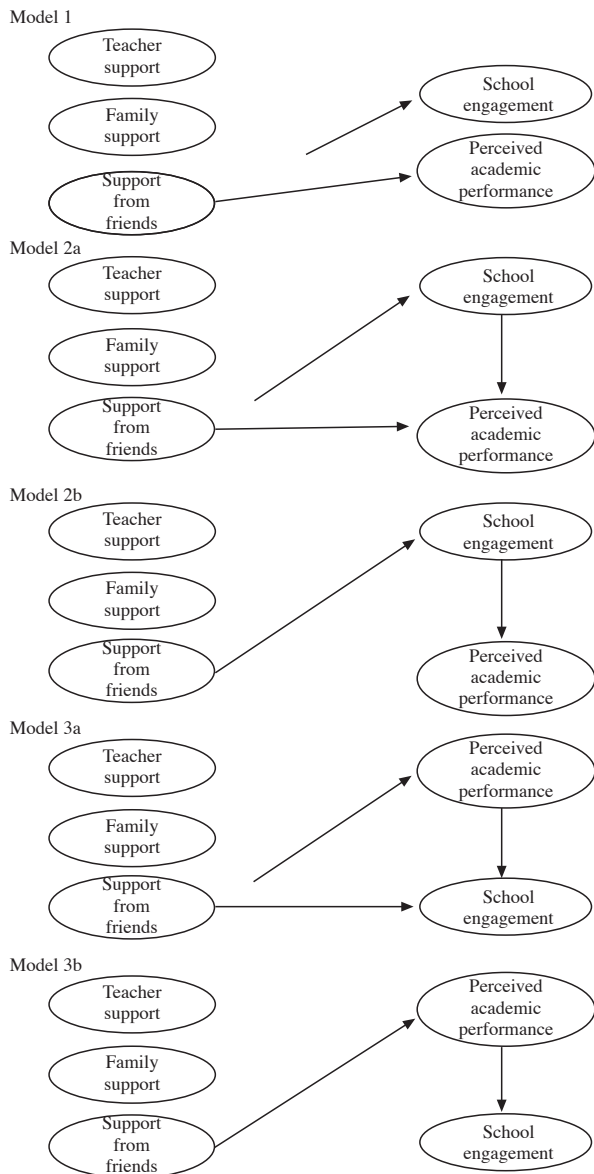
In addition to analyzing the information available regarding the study variables and their interrelationships, it is also important to analyze the possible mediator effect of the two school adjustment indicators. Previous studies have explored the mediator effect of school engagement in the relationship between social support from teachers and family and academic performance (Lam et al., 2012; Oriol-Granado et al., 2017), finding that relationships with teachers and family explain student engagement, and that this in turn explains their performance. Friends appear not to have any direct effect on school engagement (Pietarinen, Soini, & Pyhältö, 2014) or any indirect effect on academic performance (Lam et al., 2012). However, no model has ever been proposed that analyzes the mediator effect of either academic performance or perceived academic performance in the relationship between perceived social support and school engagement among secondary school students.

In light of the above, the aim of this study is to analyze the effect of perceived social support (from teachers, family and friends) on school adjustment variables (school engagement and perceived academic performance). To this end, different theoretical models were tested to determine which had the best fit in terms of explaining these relationships (Figure 1). Model 1 establishes the effect of perceived social support on school engagement and perceived academic performance, locating both adjustment variables at the same level with no causal relationship between them. Model 2 establishes school engagement as a partial mediator variable in the relationship between perceived social support and perceived academic performance. In Model 2<sub>p</sub>, school engagement is established as a full mediator variable in the relationship between perceived social support and perceived academic performance. Model 3 establishes perceived academic performance as a partial mediator variable in the relationship between perceived social support and school engagement. Finally, in Model 3<sub>p</sub>, perceived academic performance is established as a full mediator variable in the relationship between perceived social support and school engagement.

## Method

### Participants

Participants were 1,457 students, 51% girls and 49% boys, from 5 public secondary schools (61%) and 4 semi-private ones (39%) in the Basque Country. The semi-private schools (i.e., private schools which receive some state-funding) are attended by students from families



**Figure 1.** Conceptual diagrams of the hypothesized models

with a medium-high socioeconomic level, while those attending 3 of the public schools have a medium socioeconomic level and those attending the other 2 have a low level. Participants were selected by systematic random sampling from the official list published by the Basque Government Department of Education. Participants were all aged between 12 and 17 years ( $M=14.03$ ;  $SD=1.36$ ) (Table 1).

*Table 1*  
Distribution of participants by sex and school, with age means and standard deviations

Sex	Public ( $M_{age}$ , $SD_{age}$ )	Semi-private ( $M_{age}$ , $SD_{age}$ )	Total ( $M_{age}$ , $SD_{age}$ )
Boys	446 (14.10, 1.49)	261 (13.93, 1.10)	707 (14.04, 1.36)
Girls	441 (14.20, 1.48)	309 (13.77, 1.12)	750 (14.02, 1.36)
Total	887 (14.14, 1.49)	570 (13.85, 1.11)	1457 (14.03, 1.36)

### Instruments

Perceived teacher support was assessed using the subscale of the same name from the *Teacher and Classmate Support Scale-TCMS* (Torsheim, Wold, & Samdal, 2000) (4 items, 5 response options), validated for Spanish adolescents (Fernández-Lasarte et al., 2019). The subscale assesses fair treatment, help and teachers' interest and friendliness to students (*Our teachers treat us fairly; When I need extra help, I can get it*). The original internal consistency was between  $\alpha=.81$  and  $\alpha=.77$ , and was  $\alpha=.75$  in this study.

The *Family and Friends Social Support scale (AFA-R)* (González & Landero, 2014) comprises 14 items (rated on a 5-point Likert-type scale). The two factors *family support* and *Support from friends* assess the extent to which respondents perceive family and friends as being available to talk and provide help, affection and support, as well as their satisfaction with the support received (*I'm satisfied with the support I receive from my family; I have friends who help me with schoolwork*). The internal consistencies found during the initial validation were  $\alpha=.92$  and  $\alpha=.89$  for *family support* and *support from friends*, respectively, and were  $\alpha=.85$  and  $\alpha=.83$  in this study.

The *School Engagement Measure (SEM)* (Fredricks, Blumenfeld, Friedel, & Paris, 2005) offers 5 response options for each item and assesses the 3 dimensions of school engagement: *behavioral* (5 items), *emotional* (6 items) and *cognitive* (8 items) (*I pay attention in class; I feel happy in school; I study at home even when I don't have a test*). In the Spanish validation, the internal consistency coefficients are  $\alpha=.74$  for *behavioral engagement*,  $\alpha=.81$  for *emotional engagement* and  $\alpha=.77$  for *cognitive engagement* (Ramos-Díaz, Rodríguez-Fernández, & Revuelta, 2016); the values found in this study were practically identical.

The perceived academic performance subscale of the *Brief School Adjustment Scale (EBAE-10)* (Moral-de-la-Rubia, Sánchez-Sosa, & Villarreal-González, 2010) contains 3 items with 6 response options (*I get good grades; I think I'm a good student*) which measure respondents' perceived self-efficacy, motivation and good grades. The internal consistency coefficient found in the original validation was  $\alpha=.78$ , and in this study it was  $\alpha=.75$ .

### Procedure

Management teams at the selected schools were contacted to present the research project and request their voluntary participation. Written authorization from families was also required. The researchers administered the battery of questionnaires during class time, after first assuring students of the voluntary and anonymous nature of their participation. The session lasted approximately half an hour and the single blind procedure was applied.

The research project complies with all the guidelines and ethical rules established by the American Psychological Association (APA, 2010): authorization and informed consent, privacy and confidentiality, non-discrimination, non-payment, withdrawal at any time and explanation of the results. It also complies with the specific basic ethical principles established by the Ethical Commission in Research and Teaching (EID/IEB) at the University of the Basque Country (UPV/EHU).

### Data analysis

To ensure multivariate normality, the bootstrap method was applied, as offered by the AMOS 24 program (2,000 repetitions and 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). In the case of missing values (2.3%), using the expectation maximization (EM) algorithm and the Markov chain Monte Carlo, an approximate score was extracted for the item, based on the total responses given by each participant. Outliers (1.1%) were also eliminated. All this was carried out using the SAS program.

The hypothesized models were confirmed by means of the structural regression model test, which forms part of the Structural Equation Models methodology, under the maximum likelihood procedure, using the AMOS 24 software. Diverse indexes have been proposed to test models' goodness of fit (Byrne, 2001): Chi-square ( $\chi^2$ ) and its associated likelihood, CFI (Comparative Fit Index) and 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), as well as the Chi-square test, the Expected Cross-Validation Index (ECVI), the Akaike information criterion (AIC) and the consistent Akaike information criterion (CAIC) to compare estimated models. All were used in this study.

## Results

### Measurement model

The measurement model included 5 latent variables. In the case of social support (teacher support, family support and support from friends) and academic performance variables, the indicators were the items in the questionnaires administered. In the case of school engagement (behavioral, emotional and cognitive), indicators were the parcels of the different scales. The reason for this was to reduce the number of observable variables and the complexity of the model. The analysis of the measurement model revealed an acceptable fit, with indicators located at initial fit levels (accepted levels being  $>.05-.08$ ):  $\chi^2_{(236)}=1362.73$ ,  $p<.001$ ; CFI=.922; TLI=.908; SRMR=.053; RMSEA=.057, CI 90% [.054, .060]. All factor loadings of the indicators pertaining to the latent variables were significant ( $p<.01$ ), thus confirming that all latent factors were correctly represented by their indicators. The descriptive statistics and correlations between study variables are shown in Table 2.

### Analysis of the proposed theoretical models

After analyzing the measurement model, the global fit for each of the theoretical models to be tested (Figure 1) was estimated with

*Table 2*  
Correlations, means and standard deviations of the variables

Variables	1	2	3	4	5	6	7
1. Teacher support	1	.274**	.065*	.375**	.376**	.318**	.474**
2. Family support		1	.333**	.297**	.294**	.250**	.326**
3. Support from friends			1	.067*	.052*	.024	.194**
4. Academic performance				1	.546**	.414**	.518**
5. Behavioral engagement					1	.396**	.475**
6. Cognitive engagement						1	.439**
7. Emotional engagement							1
Mean	13.53	32.70	28.30	11.80	3.84	2.84	3.60
SD	3.21	5.33	4.51	3.15	.58	.71	.69

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

the aim of verifying the relationships between the study variables: firstly, the complete structural regression model for *social support* on the variables *school engagement* and *academic performance* with no mediator variable ( $M_1$ ); secondly, both the partial mediation model, which proposes direct pathways from *social support* to *academic performance* ( $M_{2a}$ ) and the full mediation model between *social support* and *academic performance* through *school engagement* ( $M_{2b}$ ); and finally, the partial ( $M_{3a}$ ) and full ( $M_{3b}$ ) mediation model between *social support* and *school engagement* through *academic performance*.

The  $M_1$  model proposed that social support dimensions predict *school engagement* and *academic performance*. An initial analysis of the resulting parameters indicated that this model had an acceptable fit:  $\chi^2_{(237)}=1600.91$ ,  $p<.001$ ; CFI=.910; TLI=.900; SRMR=.061; RMSEA=.063, CI 90% [.060, .066]. To test models  $M_{2a}$  and  $M_{2b}$ , the goodness of fit indexes of the partial mediation model (direct pathway from *social support* to *academic performance*) were compared with those of the full mediation model (direct pathway from *social support* to *academic performance* limited to zero). The Chi-square test on the discrepancy between the two models ( $\chi^2_{(3)}=299.28$ ,  $p<.05$ ) was found to be statistically significant, indicating that they are significantly different from each other. This was further confirmed by the Expected Cross-Validation Index (ECVI), the Akaike information criterion (AIC) and the consistent Akaike information criterion (CAIC), which indicated that  $M_{2a}$  was more replicable since it had a lower value than  $M_{2b}$ , and was therefore the first-choice model for explaining *academic performance* based on *social support* and *school engagement*, with the following fit:  $\chi^2_{(238)}=1528.15$ ,  $p<.001$ ; CFI=.910; TLI=.900; SRMR=.054; RMSEA=.061, CI 90% [.058, .064].

The analysis of the goodness of fit indexes of the final two models tested revealed that both  $M_{3a}$  and  $M_{3b}$  had acceptable levels. The Chi-square test on the discrepancy between the two models ( $\chi^2_{(3)}=279.73$ ,  $p<.05$ ) was found to be statistically significant, indicating that they are different from each other. This was further confirmed by the ECVI, AIC and CAIC indexes, which indicated that  $M_{3a}$  was more replicable since it had a lower value than  $M_{3b}$ , and was therefore the first-choice model for explaining *school engagement* based on *social support* and *academic performance*, with the following fit:  $\chi^2_{(237)}=1509.24$ ,  $p<.001$ ; CFI=.912; TLI=.900; SRMR=.054; RMSEA=.060, CI 90% [.058, .063].

The goodness of fit indexes found for all five models tested (Table 3) were acceptable. However, when both the ECVI and the AIC and CAIC are taken into account, it becomes clear that  $M_{3a}$  is the most replicable, and therefore the first-choice model. Furthermore, this model was also found to have better fit values than the others.

### Standardized regression coefficients

An individual examination of the regression coefficients of the first-choice model (Table 4) revealed that the majority of the direct pathways proposed had a significance level of  $p<.05$ , with the exception of the *support from friends-school engagement* ( $\beta=.051$ ,  $p>.05$ ) and *support from friends-academic performance* pairs ( $\beta=-.023$ ,  $p>.05$ ).

Alongside *perceived academic performance* as a mediator variable, the dimensions of *perceived social support* were found to predict 73% of *school engagement*, and *perceived social support* was found to predict 20% of *perceived academic performance*.



*Table 3*  
Goodness-of-fit indexes for the full and partial mediation models

Model	$\chi^2_{(df)}$	CFI	TLI	SRMR	RMSEA <sub>(IC)</sub>	ECVI <sub>(IC)</sub>	AIC	CAIC
M <sub>1</sub>	1600.91 <sub>(237)</sub>	.910	.900	.061	.063 <sub>(.060-.066)</sub>	1.18 <sub>(1.09-1.27)</sub>	1726.91	2123.29
M <sub>2a</sub> Partial mediation	1528.15 <sub>(238)</sub>	.910	.900	.054	.061 <sub>(.058-.064)</sub>	1.13 <sub>(1.05-1.21)</sub>	1652.15	2042.23
M <sub>2b</sub> Full mediation	1827.43 <sub>(241)</sub>	.900	.900	.075	.067 <sub>(.064-.070)</sub>	1.33 <sub>(1.24-1.42)</sub>	1945.43	2316.64
$\Delta M_{2a}-M_{2b}$	299.28 <sub>(3)</sub>							
M <sub>3a</sub> Partial mediation	1509.24 <sub>(237)</sub>	.912	.900	.054	.060 <sub>(.058-.063)</sub>	1.12 <sub>(1.03-1.20)</sub>	1635.24	2031.61
M <sub>3b</sub> Full mediation	1788.97 <sub>(240)</sub>	.900	.880	.065	.066 <sub>(.063-.069)</sub>	1.30 <sub>(1.21-1.40)</sub>	1908.97	2286.47
$\Delta M_{3a}-M_{3b}$	279.73 <sub>(3)</sub>							

*Note:* CFI and TLI > .90 (acceptable fit); RMSEA and SRMR < .05 (adequate fit) or .05 ≥ .08 (acceptable fit); AIC, ECVI and CAIC lower values

*Table 4*  
Standardized regression coefficients

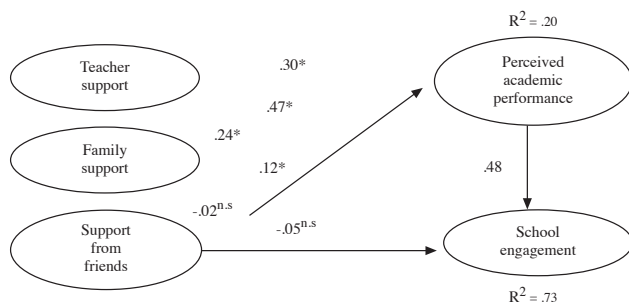
	Standardized beta
<i>Direct effects</i>	
Teacher support → School engagement	.469*
Teacher support → Academic performance	.303*
Family support → School engagement	.121*
Family support → Academic performance	.242*
Support from friends → School engagement	.051
Support from friends → Academic performance	-.023
Academic performance → School engagement	.481*
<i>Indirect effects</i>	
Teacher support → Academic performance → School engagement	.075
Family support → Academic performance → School engagement	.087
Support from friends → Academic performance → School engagement	-.008*

*Note:* \* $p < .05$ .  $R^2(\text{Academic performance}) = .197$ ;  $R^2(\text{School engagement}) = .731$

Both *teacher support* and *family support* directly determined both indicators of school adjustment, while *support from friends* was found to do so indirectly. It is important to highlight the weak effect of *family support* on both dimensions of school adjustment, coupled with the much stronger effect of *teacher support*. For its part, *perceived academic performance* directly determined *school engagement*. The final structural model is shown in Figure 2.

### Discussion

The studies carried out to date on the role of social support in school adjustment are inconclusive, since some authors argue



**Figure 2.** Final structural model

that all three types of support (from family, teachers and friends) may be relevant (Cirik, 2015; Ramos-Díaz, Rodríguez-Fernández, Fernández-Zabala et al., 2016), while others claim that not all of them exert the same influence (Kozan et al., 2014). Neither is it clear whether school engagement is the cause (Oriol-Granado et al., 2017; Ramos-Díaz, Rodríguez-Fernández, & Revuelta, 2016) or the consequence of considering oneself to be a good student, or whether either of these two variables mediates between perceived social support and the other remaining variable of school adjustment, or whether both are a simultaneous consequence of said support. Consequently, the aim of this study was to test a theoretical model of the predictive role played by perceived social support in relation to the indicators of school adjustment.

After comparing the different possible models, the one found to best fit the data establishes the predictive power of perceived social support on school engagement, both directly and indirectly through perceived academic performance. These results suggest that the support perceived by students from their main social networks influences their degree of engagement at school, although this influence is also exerted through perceived academic performance, with social support fostering students' perception of themselves as good students, which in turn results in higher levels of school engagement.

These results contrast with those reported by previous studies advocating a model in which school engagement mediates between perceived social support and academic performance (Lam et al., 2012). These differences may be due to the fact that the present study analyzes students' perceptions of their own performance, rather than their real performance. Moreover, the existence of empirical studies which support the bidirectional effect between the two variables of school adjustment (engagement and performance) during adolescence (Chase, Hilliard, Geldhorf, Warren, & Lerner, 2014; Mikami et al., 2017; Wang & Fredricks, 2014), alongside the acceptable fit obtained by the other models analyzed here, indicate the need for further exploration and study, with a special focus on the potential role of a third variable not taken into account here, namely students' academic grades. There are therefore a number of possible scenarios which future research should seek to analyze: (a) both real and perceived academic performance predict school engagement simultaneously; (b) perceived academic performance influences school engagement, and this in turn influences real academic performance; and (c) the effects are circular, with perceived performance influencing engagement, engagement influencing real performance, and real performance influencing perceived performance.

One of the contributions made by this study is the finding that perceived academic performance mediates between social support and school engagement. This is important not only because of the lack of results reported in this sense over recent years, but also because it suggests that perceived academic self-efficacy by students may mediate and foster their school engagement, thereby opening up new possibilities for helping those with lower levels of commitment and participation at school. The social environment should focus its support on ensuring that students improve their perceptions of their academic self-efficacy, since seeing themselves as better students who want to continue their studies will indirectly increase their level of engagement at school, encouraging them to feel happier and closer to the school community and more satisfied with their educational career, which in turn will motivate them to make a greater effort and invest more in learning.

Not all the sources of support analyzed influence perceived performance and school engagement, and not all do so to the same extent. Consistently with previous findings (Gutiérrez et al., 2017), the results of this study indicate that support from friends has no direct significant effect on either of the two measures of school adjustment, whereas the effect of teacher support on both is much greater, followed by family support (Cirik, 2015; Lam et al., 2012; Ramos-Díaz, Rodríguez-Fernández, Fernández-Zabala et al., 2016).

These differences highlight the fact that, while teacher and family support are important for students' school adjustment, the friendship group emerges as possibly a different context, separate from the school (Fernández-Lasarte et al., 2019; Rodríguez-Fernández et al., 2018). Teachers and families may predict students' academic performance by providing informational and emotional support, respectively (Hombrados-Mendieta et al., 201), while peers may have an impact on social behavior (Wentzel, Russell, & Baker, 2016).

In sum, perceived social support is an individual necessity that is clearly linked to both students' school engagement and their academic performance (Wonglorsaichon, Wongwanich, & Wiratchai, 2014), as well as to their perceptions of their own academic self-efficacy. This finding has important educational

implications: teachers should be aware of their influence over students' school adjustment and work to improve the support they provide them, offering sufficient informational and emotional feedback in the classroom to ensure their positive adaptation to the school context.

Moreover, understanding the multi-causal nature of school adjustment indicators enables the design of psychoeducational interventions aimed at fostering positive relationships between students and their social environment (teachers and families), due to the key supportive and protective role played by this context in connection with developmental and academic tasks and challenges. Such interventions would also enable longitudinal experimental studies to be conducted to analyze the causal relations which exist between perceived social support and school adjustment, as opposed to the cross-sectional design of the present study.

Future research should also include assessment methods that take into account the information obtained from other objective sources, such as teachers, families and peers, as well as the students' grades themselves. Despite the good psychometric properties of the measures selected and the relevance of students' own beliefs about their performance and available support, self-report scales could perhaps be complemented in the future by direct measures in order to further strengthen the validity of the results.

Finally, it would be interesting to carry out comparative studies between different types of schools in order to explore the effect of support from friends. Presumably, friendship groups in rural schools would be same as the peer group existing outside them, and may exercise a greater influence over school adjustment than in the case of larger schools or those located in an urban environment.

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