Revista de Psicodidáctica, 2019, 24 (1), 46–52

Revista de Psicodidáctica

www.elsevier.es/psicod

Original

School Coexistence and Its Relationship with Academic Performance Among Primary Education Students☆

Gamal Cerda[a,*], Carlos Pérez[b], Paz Elipe[c], José A. Casas[d], and Rosario Del Rey[e]

[a] Universidad de Concepción, Chile
[b] Universidad de O'Higgins, Chile
[c] Universidad de Jaéen, Spain
[d] Universidad de Córdoba, Spain
[e] Universidad de Sevilla, Spain

ARTICLE INFO

Article history:
Received 5 December 2017
Accepted 23 May 2018
Available online 21 June 2018

Keywords:
School coexistence
Academic performance
Primary school
Structural equations

ABSTRACT

Past research has shown the influence of various factors, both personal and contextual, on school performance. This study explores the association between academic performance and students' perceptions of school coexistence from a multidimensional approach. The participants were 1016 Chilean students (49.9% girls, 50.1% boys; $M = 9.72$, $SD = .97$ years). A structural equation model relating academic performance with the eight dimensions of coexistence considered in this study was performed. The model explains a 39.6% of the variability in school performance. We highlight the negative impact of levels of indiscipline, aggression, victimization, and teacher apathy on academic performance; and conversely, the positive and protective role of positive interpersonal management, normative adjustment, and peer social networks. The implications of these results for intervention in the school system are discussed from an individual and contextual perspective.

Convivencia escolar y su relación con el rendimiento académico en alumnado de Educación Primaria

Palabras clave:
Convivencia escolar
Rendimiento académico
Educación primaria
Ecuaciones estructurales

RESUMEN

Diversos estudios han puesto de manifiesto la influencia de distintos factores, tanto personales como contextuales, sobre el rendimiento escolar. Esta investigación explora la asociación entre rendimiento escolar y percepción del alumnado sobre la convivencia escolar desde una aproximación multidimensional. El estudio cuenta con la participación de 1016 estudiantes chilenos (49.9% chicas, 50.1% chicos; $M = 9.72$, $DT = .97$ años). Se analiza un modelo de ecuaciones estructurales que relaciona el rendimiento académico con las ocho dimensiones de la convivencia consideradas en este estudio. Este modelo explica el 39.6% de la variabilidad del rendimiento escolar. Se enfatiza el impacto negativo de los niveles de indisciplina, agresividad, victimización y desidia docente sobre el rendimiento académico; y contrariamente, el rol protector y positivo de la gestión interpersonal positiva, ajuste normativo, y red social de iguales. Se discuten las implicaciones de estos resultados para la intervención en el sistema escolar desde una perspectiva individual y contextual.

Introduction

At present, various studies show the need to consider a multiplicity of variables that interact in a complex and interdependent way to explain school performance (Benson, Kranzler, & Floyd, 2016; Frugård Strøm, Thoresen, Wentzel-Larsen, & Dyb, 2013). Several research evidences a positive relationship between a

PII of original article:S1136-1034(17)30313-1.
☆ Please cite this article as: Cerda G, Pérez C, Elipe P, Casad JA, Del Rey R. Convivencia escolar y su relación con el rendimiento académico en alumnado de Educación Primaria. Rev Psicodidáct. 2019;24:46–52. https://doi.org/10.1016/j.psicod.2018.05.001
* Corresponding author.
E-mail address: gamal.cerda@udec.cl (G. Cerda).

2530-3805/

good school climate and positive academic achievements (Djigic & Stojiljkovic, 2011; Høigaard, Kovac, Overby, & Haugen, 2015). Within this perspective, the importance of the interpersonal interactions, as well as the perception that school community, especially the students, have about the school environment, climate, and coexistence have been strongly established (Košir & Tement, 2014). Schools are organizations with structures, practices, and norms that can hinder or, on the contrary, support good teaching, and therefore, have a significant impact on learning achievement (Goddard, Goddard, Sook Kim, & Miller, 2015). Currently, the theoretical perspective regarding these socio-contextual variables highlights the multidimensionality of school climate and how this affects student performance (Kraft, Marinell, & Yee, 2016). This perspective of school climate makes possible a better understanding of the complexity of students' experiences at school. Furthermore, it reveals relevant information for education agents in order to design potential interventions aimed at achieving improved learning outcomes (Berkowitz et al., 2015).

A review of multiple studies regarding school climate identifies, at least, four key areas: the general quality of the academic environment, professional development, community, and institutional environment (Cohen, McCabe, Michelli, & Pickeral, 2009). Within these areas, the review by Wang and Degol (2016) analyze the quality of interpersonal relationships within a school, both between teachers and authorities, and between teachers and students. This review highlights the importance of consistent and fair disciplinary practices on the physical and emotional security of the school members, especially students. Besides, educational establishments that are characterized by high standards in their interpersonal relationships show clear signs of cohesion, communication, and belonging between students and teachers, as well as provide psychological and academic support to students, promoting the optimal development of their abilities and enhancing academic achievement (Wang & Holcombe, 2010).

Regarding individual factors, there is evidence of the relationship between student perception of the classroom environment and the school as a whole, and the academic results that these students achieve (McMahon, Wernsman, & Rose, 2009). In this sense, girls usually show a stronger feeling of belonging to school as well as a more positive perception of the coexistence than boys (Díaz-Aguado & Martín, 2011).

A positive school climate may also provide some protection for students coming from vulnerable contexts, representing a moderating factor with respect to the possible negative effects of unfavorable contextual factors on academic performance (Hopson & Lee, 2011; Maxwell, 2016; O'Malley, Voight, Renshaw, & Eklund, 2015). This positive perception of school climate also has a favorable impact on the social, emotional, and academic development of teenagers (De Pedro, Gilreath, & Berkowitz, 2016).

Furthermore, teacher perceptions of school climate are consistently and significantly associated with student performance in standardized academic tests and have a positive association with academic, behavioral, and socio-emotional adjustment indices (Brand, Felner, Seitsinger, Burns, & Bolton, 2008). A positive and comforting coexistence leads to a climate of well-being that stimulates both work and the adoption of cognitive tasks that require student concentration and teacher recognition (Córdoba, Del Rey, & Ortega, 2014).

On the other hand, in a Spanish-speaking scientific context, school coexistence emerges as a construct that addresses, in addition to the key elements of school climate, some that have not been systematically addressed, such as school violence (Córdoba et al., 2014). Different studies have revealed the importance of school climate in predicting violent behavior among peers, indicating that students who perceive coexistence negatively are more likely to be involved in violence (Cerezo & Ato, 2010; Jiménez, Estévez, & Murgui, 2014). On the other hand, students who report being rejected by their peers in the school tend to have a low self-perception of academic effectiveness, in turn resulting in lower school performance (Schenke, Lam, Conley, & Karabnick, 2015). In addition, low school attendance, low levels of school satisfaction, and a wide range of physical and psychological health problem symptoms are also associated with school rejection (Arslam, Hallet, Akkas, & Akkas, 2012). In the same way, discipline problems within the school are related, directly and negatively, to the performance and motivation levels for student learning (Arens, Morin, & Watermann, 2015). In essence, situations of school violence not only leave a psychological mark on students, but also have an impact on learning and performing school tasks.

There is also evidence that involving teachers and parents in student academic tasks and good interpersonal relationships among members of the educational community have a positive effect on performance (Kodzi, Oketch, Ngware, Mutisya, & Nderu, 2014).

Eventually, school coexistence affects, positively or negatively, not only to learning processes, but also to multiple aspects of student personal development, such as the perception of subjective well-being (Jiménez & Lehalle, 2012) or self-esteem (Villarreal-González, Sánchez-Sosa, Veiga, & del Moral, 2011).

Based on the previous considerations, this study makes an approach from a perspective of wide school coexistence, integrated by multiple dimensions and aspects, close to the authors' conceptions indicating that the school climate involves all institution or school agents (Tapha, Cohen, Guffey, & Higgins-D'Alessandro, 2013; Wang & Degol, 2016; Zullig, Koopman, Patton, & Ubbes, 2010). In particular, this research aims to investigate school coexistence in an educational institution from the students' perspective in various aspects. On the one hand, we analyze aspects of institutional management, which are related to the recognition of students' needs, the attention given by authorities and teachers to interpersonal relationships with students, and the problems generated by social life dynamics. On the other hand, the construct also considers positive and negative situations that students experience directly in the classroom, which are linked to the learning environment and management, such as peer support, indiscipline, or disruptiveness; the manner in which students adhere to the regulations or internal norms; or their perceptions about situations of aggression or school victimization. In addition, and taking into account that just a few studies about school climate are based on primary students (see Wang & Degol review, 2016), this study was based on this educational level.

Based on the theoretical background presented, the main aim of this research was to examine how the different dimensions of school coexistence affect academic performance in primary education. In addition, a comparison, between girls and boy, in the different dimensions of school coexistence was analyzed.

Method

Participants

The study sample was composed of 1016 Chilean students, belonging to 14 schools (49.9% girls and 50.1% boys) of which, a 29.4% belong to public and a 70.6% to subsidized educational establishments; ages from 8 to 11 years ($M = 9.72$, $SD = .97$ years). The sampling method used was incidental sampling. It is pertinent to mention that, in the Chilean educational system, certain schools receive state contributions. Within the group receiving contributions, there are public (municipal) schools and subsidized schools. The latter receives state contributions according to a direct payment, which is based on student attendance records. Public schools, conversely, are generally owned by the municipalities

where the schools are located. There are also private schools which do not receive state contributions (not included in this study). Regarding this Chilean educational situation, some studies have shown a clear association between school administration type and socioeconomic level of the families' students belong to. Thus, public schools are associated with low socioeconomic levels, subsidized with medium levels, and private schools with high socioeconomic levels (Bellei, 2013). In the same way, it has been established that among these three types of administrative dependence, there are significant gaps in academic performance, which increase progressively and consistently with age (Rosas & Santa Cruz, 2013).

Instruments

School Coexistence Scale (SCS) (Del Rey, Casas, & Ortega-Ruiz, 2017). This scale was used to assess school coexistence. This is a self-report instrument to assess this construct from a multidimensional approach. It is a 50-item Likert scale, with five response options, regarding frequency of some situations in school. Response options range from 0 (*never*) to 4 (*always*). The SCS scale consists of eight dimensions that account for the school coexistence construct, namely: (1) Positive Interpersonal Management: composed of 11 items, alluding to the type of interpersonal relations between teachers and other teachers, families, and students. For example: "There are good relationships between teachers and students" ($\alpha = .76$; $\omega = .88$); (2) *Victimization:* composed of six items about students' perceptions of their possible exposure to violent negative actions by other students. For example: "One of my classmates has hit me" ($\alpha = .72$; $\omega = .85$); (3) *Disruptiveness:* composed of six items, associated with negative actions performed by peers that interrupt the teaching-learning process. For example: "There are children who disturb the class" ($\alpha = .74$; $\omega = .84$); (4) Peer Social Networks: composed of nine items, aimed at observing the degree of support and strengths of the peer microsystem that boost student personal and socio-emotional development. For example: "My classmates help me when I need it" ($\alpha = .76$; $\omega = .86$); (5) *Aggression:* composed of four items, examines the presence of possible hostile behavior by students toward their classmates. For example: "I have insulted one of my classmates" ($\alpha = .69$; $\omega = .87$); (6) *Normative adjustment:* consisting of five items, analyzes students' degree of adherence to the norms established by the school regarding behavior. For example: "I let others work without disturbing them" ($\alpha = .68$; $\omega = .85$); (7) *Indiscipline*: composed of four items, analyzes students' perceptions of actions or behaviors that are contrary to the norms of classroom and institution coexistence. For example: "How many times have you been punished?" ($\alpha = .48$; $\omega = .77$); (8) Teacher Apathy: composed of five items, analyzes teacher actions characterized by disinterest, injustice, or incoherence in managing interpersonal relationships. For example: "Teachers only explain to clever students" ($\alpha = .57$; $\omega = .79$).

Furthermore, the results obtained from the confirmatory factor analysis of the SCS scale corroborate its original eight-dimensional composition, $\chi^2_{SB} = 3424.65$, $df = 1147$, $p = .00$, CFI = .959, NNFI = .956, IFI = .959, RMSEA = .035 [CI .034–.037]. The Average Variance Extracted (AVE) coefficients are between .24 and .37, and the Composite Reliability (CR) coefficients are between .58 and .77, for the eight dimensions. The reliability coefficient rho for the total scale is .659.

Additionally, this scale has shown good psychometric properties in previous studies as well as invariance across Chilean and Spanish populations showing its adequacy as reliable and valid instrument for the multidimensional assessment of the schoolwide climate (Del Rey, Casas, & Ortega-Ruiz, 2017; Elipe et al., 2018). In order to assess the students' general academic performance, the final grade average was used of all subjects in each school year prior to the date of applying the scale. In most cases, this corresponds to the academic record of the last 4 years and spread out over time. For this purpose, we accessed the registration and institutional records of each school, guaranteeing that this information was reliable. The grading scale in Chile considers a range from 1.0 to 7.0. The grade average is defined as the simple average considering all subjects that each student takes during each school year.

Procedure

After identifying the 14 schools, each expressed its willingness to participate in the study. School supervisors and principals, as well as student guardians, were informed about the research objective. They signed the respective ethical consents and authorizations, guaranteeing the confidentiality of the information and of the subsequent data processing. Data collection was performed by members of the research team. Students were also informed of the anonymous and voluntary character of participating in the study. All of the above was performed according the guidelines of the international ethical standards for this type of study with people, which were previously analyzed and accepted by the Ethics Committees of the institutions to which the researchers belong and by the Fondecyt/Conicyt Bioethics advisory committee. These last organizations are responsible for competitive research projects in Chile, all of which follow international guidelines on research with human beings (Singapore Declaration). The scale was applied collectively, verifying that the response instructions were correctly internalized, based on the examples in the application protocol. The scale was applied to all students of the corresponding educational levels who agreed to complete it, and response completion did not exceed 20 minutes.

Data analysis

In order to explore the differences between sex in the dimensions of school coexistence, a comparative analysis was performed by applying the *t* test, for independent groups, including descriptors of the eight dimensions of school coexistence (means, standard deviations), and also the effect size for each of these differences.

Then a structural equation model relating the eight dimensions of coexistence, correlated between then, to academic performance was tested. Due to the ordinal character of the variables and the absence of multivariate normality, showed according to Bentler (2006) by a Mardias' coefficient > 5, specifically 697.08, the Robust Maximum Likelihood Method with Satorra and Bentler (2001) correction for the chi-square statistic was used (Finney & DiStefano, 2006; Flora & Curran, 2004; Mardia, 1970). In addition, the Bentler-Bonett Non-Normed Fit Index (BBNFI) and the Robust Comparative Fit Index (RCFI) were used, all of which reported values above .95, above the appropriate fit criterion .90 (Schumacher & Lomax, 1996). As for the Root Mean Square Error of Approximation (RMSEA), a value lower than .08 was reported, considered adequate for this type of analysis (Browne & Cudeck, 1993). Statistical analyses were performed using SPSS software, version 20 and EQS 6.2 (Bentler, 2006).

Results

First of all, the comparative analysis results of students' perceptions in each scale dimension, according to sex, are presented (see Table 1).

The results show that girls have a more positive perception regarding interactions and relationships occurring within the establishment, higher scores on *positive interpersonal management* and *peer social networks* as well as higher *normative adjustment*. On the contrary, the boys show higher scores in both, *victimization* and

Table 1
Comparative analysis of mean scores of students' perceptions on the dimensions of school coexistence according to sex

Dimensions	Girls ($n = 507$)		Boys ($n = 509$)		t	d
	M	*SD*	*M*	*SD*		
Positive interpersonal management	3.47	0.50	3.39	0.52	2.25*	0.14
Victimization	0.67	0.67	0.83	0.72	−3.60**	0.22
Disruptiveness	1.62	0.77	1.65	0.83	−0.65	0.04
Peer social networks	3.12	0.62	2.98	0.67	3.43**	0.21
Aggression	0.43	0.58	0.75	0.79	−7.43**	0.45
Normative adjustment	3.40	0.62	3.14	0.73	6.22**	0.19
Indiscipline	0.97	0.70	1.31	0.89	−6.69**	0.41
Teacher apathy	1.14	0.76	1.29	0.86	−.2.93**	0.06

* $p < .05$.
** $p < .005$.

aggression, as well as in relation to *indiscipline*. No differences were found in *disruptiveness*.

The tested structural equation model showed adequate fit indices: χ^2_{SB} (1189) = 2445.59; $p = .000$; RCFI = .973; BBNNFI = .971; RMSEA = .032, (.030, .034), indicating a good fit of the data to the theoretical model. As can be seen in Figure 1, the standardized regression coefficients show that student *normative adjustment* has a direct and positive influence on *academic performance* (β = .756; $p < .001$); the same occurs with *positive interpersonal management* (β = .435; $p < .001$), and *peer social networks* (β = .424; $p < .001$). On the contrary, the dimension of school coexistence so called *teacher apathy* has a negative and significant relationship on *academic performance* (β = −673; $p < .001$), as well as happens with *indiscipline* (β = −.546; $p < .001$), *victimization* (β = −.383; $p < .001$), *aggression* (β = −.331, $p < .001$), and *disruptiveness* (β = −.097; $p < .01$) dimensions. This model predicts 39.6% of the variance in student academic grade averages.

The stronger associations were found between *academic performance* and *normative adjustment*, in a direct way, and *academic performance* and *teacher apathy*, in an inverse way.

As can be observed in Table 2, all the scale dimensions show a statistically significant relationship between them and with student general academic performance. In particular, there are positive and moderately high correlations between the dimensions of *positive interpersonal management*, *adjustment to norms*, and *peer social networks* and *academic performance*. Conversely, if students perceive high levels of *aggression*, *victimization*, *teacher apathy*, *disruptiveness*, and *indiscipline*, their *academic performance* tends to be lower. In the same way, the dimensions that could be considered unfavorable regarding a suitable school climate or coexistence correlate positively amongst themselves, and negatively with the group of dimensions that would be considered favorable for coexistence.

Eventually, in order to make explicit the composition of the latent dimensions of the school coexistence construct, Table 3 shows the loadings and errors of the items that compose each dimension.

Discussion

Our results reveal that students' perceptions of school coexistence in their respective schools has an important impact in their general academic performance, which is in line with other international and Chilean studies (De Pedro, Gilreath, & Berkowitz, 2016; Treviño, Place, & Gempp, 2012). On the one hand, positive dimensions of coexistence, such as the positive perception

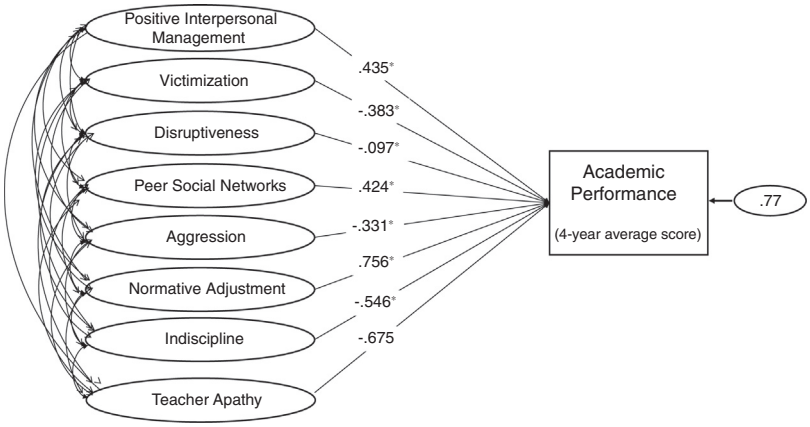

Figure 1. Structural equations model of the relationship between the school coexistence and academic performance.

Table 2
Distribution of means (M), standard deviations (SD), minimum (MIN), and maximum scores (MAX), obtained in each of the SCS dimensions, and correlation matrix between latent variables and academic performance

	M	*SD*	MIN	MAX	PIM	VIC	DIS	PSN	AGG	NA	IND	TA	AP
PIM	3.42	.52	.91	4.00	1	−.47**	−.58**	.68**	−.52**	.68**	−.59**	−.72**	.46**
VIC	0.75	.70	.00	4.00		1	.70**	−.59**	.65**	−.47**	.53**	.45**	−.50**
DIS	1.64	.80	.00	4.00			1	−.46**	.56**	−.47**	.57**	.69**	−.51**
PSN	3.05	.65	.89	4.00				1	−.50**	.68**	−.52**	−.48**	.42**
AGG	.60	.71	.00	4.00					1	−.71**	.80**	.60**	−.60**
NA	3.28	.69	.00	4.00						1	−.92**	−.58**	.61**
IND	1.34	.82	.00	4.00							1	.79**	−.64**
TA	1.22	.81	.00	4.00								1	−.39**
AP	6.07	.48	4.63	6.98									1

** $p < .005$.
Note. PIM: positive interpersonal management; VIC: victimization; DIS: disruptiveness; PSN: peer social networks; AGG: aggression; NA: normative adjustment; IND: indiscipline; TA: teacher apathy; AP: academic performance.

Table 3
Model factor loadings

Item	Factor loading	Error
Positive interpersonal management		
1	0.49	0.87
4	0.62	0.79
7	0.60	0.80
10	0.33	0.94
14	0.48	0.88
18	0.69	0.72
21	0.42	0.91
25	0.69	0.73
27	0.77	0.63
36	0.69	0.72
41	0.71	0.71
Peer social networks		
5	.46	.89
12	.63	.85
17	.52	.82
26	.57	.82
28	.51	.86
33	.72	.70
38	.54	.84
42	.62	.79
46	.69	.73
Victimization		
2	.38	.92
6	.70	.72
11	.75	.67
15	.76	.66
19	.49	.87
22	.67	.75
Disruptiveness		
3	.52	.89
8	.69	.73
13	.54	.84
16	.65	.76
20	.67	.75
24	.58	.81
Aggression		
30	.77	.64
35	.56	.83
44	.73	.69
49	.82	.57
Normative adjustment		
9	.55	.83
29	.64	.77
34	.71	.70
39	.78	.63
45	.61	.79
Indiscipline		
31	.23	.97
37	.58	.82
43	.80	.60
47	.61	.79
Teacher apathy		
23	.25	.97
32	.65	.76
40	.47	.88
48	.70	.72
50	.66	.75

of the management that the teacher performs on interpersonal relationships, good adjustment to norms, as well as a good social adjustment in peer networks, are directly associated with good general academic performance. Besides, as in previous studies (Díaz-Aguado & Martín, 2011), girls show higher scores than boys in the positive coexistence dimensions: interpersonal positive management, peer social network and normative adjustment. On the other hand, negative dimensions of coexistence such as victimization, disruptiveness, aggression, and indiscipline, as well as the perception that the teacher does not express interest or positive emotions to the students and does not manage good interpersonal relationships, does so in reverse. This emphasizes the positive association between the level of normative adjustment of students and their school performance, and in contrast to the close relationship between indiscipline and performance. Thus, good academic performance is related to having a good normative adjustment, and worse performance is related to perceiving coexistence with the presence of indiscipline.

In particular, it is observed that Chilean students' perceptions of school norms and rule compliance in classrooms and institutions as positive and important for good school coexistence are related to a better academic performance. Students' perception of regulations or their proper implementation are related to the order and discipline present in the school itself (Way, 2011). On the contrary, if students experience situations of indiscipline at school, their performance tends to be lower. These results are in line with those that show as school organizations with greater discipline structure show greater commitment toward learning of their students (Cornell, Shukla, & Konold, 2016).

In addition, students' perceptions about teacher management of interpersonal relationships as positive in the school has a direct and positive relationship to their academic performance. Therefore, if students perceive that there are good relationships within the school, between teachers and students, and between teachers and their parents as well, and if they feel that teachers value their work and help them, their academic performance tends to be better. This finding is in line with other studies that corroborate that there is an association between teacher classroom management and students' perceptions of the school climate (Khoury-Kassabri, 2011; Manota & Melandro, 2016). In the same way, other research supports the hypothesis that teacher-student interactions and student engagement are partially mediated by peer relationships and peer engagement (Hopson & Lee, 2011; Wang & Eccles, 2013; Zimmer-Gembeck, Chipuer, Hanisch, Creed, & McGregor, 2006). Other authors pose that a positive school climate may generate an indirect route on teacher expectations that ultimately has a significant impact on academic performance.

On the negative side, we must point out the relationship between the problems of both aggression and victimization and lower school performance. This aspect reveals the importance of social support from both teachers and peers, as well as the negative impact of violence on the school climate perception (Schenke et al., 2015). So, even when the data reported by students in these variables do not indicate alarming levels of victimization and aggression, the mere presence of some cases must be promptly attended to and prevented. This is due to the fact that they generate a relationship of mutual interrelation with the classroom environment and may be directly associated with inadequate classroom management, or have an impact on the naturalization of school violence (López, Bilbao, & Rodríguez, 2011; Steffgen, Recchia, & Viechtbauer, 2013), or on academic performance (Frugård Strøm, Thoresen, Wentzel-Larsen, & Dyb, 2013).

In this sense, some studies suggest that targeting and improving students' ability to regulate their anger can have a protective effect against victimization of peers and reduce subsequent aggressive behavior (Kaynak, Lepore, Kliewer, & Jaggi, 2015). Students' favorable perception of school cohesion and interrelationships are associated with a lower risk of victimization by peer intimidation (Zaykowski & Gunter, 2012), as well as an appropriate relationship between teachers, students, and authorities is consistently correlated with a decrease in student behavioral problems (Elsaesser, Gorman-Smith, & Henry, 2013).

It has been noted that situations of indiscipline have unfavorable repercussions on learning achievement, in this case, on academic performance. Therefore, school institutions should analyze the type of strategy that teachers use when intervening in these kinds of

situations in the classroom. Using positive behavior support strategies has a favorable repercussion on students' perceptions of the teacher-student relationship, their academic motivation, and their sense of order and justice, over discipline control strategies based on exclusion (Mitchell & Bradshaw, 2013). When students perceive that school regulations are aimed at conflict resolution in a more peaceful way, this has a positive impact on their participation in less risky behaviors (LaRusso & Selman, 2011).

The results obtained show the need to focus prevention not only on vulnerable groups but on all students and the school context. In fact, it has been observed that, in school institutions where there is a democratic coexistence, students possess higher levels of performance, controlling the effect of baseline socio-cultural variables (Castro-Morera, García-Medina, Pedroza-Zúñiga, & Case-Niebla, 2015).

Research indicates that teachers and schools must communicate their high expectations in order to prevent school failure and for effective interventions to improve student results (Brault, Janosz, & Archambaul, 2014; Walkey, McClure, Meyer, & Weir, 2013). Moreover, concern about school coexistence should be one of the cornerstones of school management, because even if it is adequate, it has a positive impact on the self-efficacy profiles of new teachers and, therefore, their effectiveness in teaching (Meristo & Eisenschmidt, 2014). The dimensions of school life that we analyzed and their relation to academic performance not only reflect the multidimensional character of school, but also reveal its possibility to change and be modified. This is the basis for the need to perform interventions that make it possible to strengthen positive conditioners and mitigate or eliminate negative conditioning factors. Explicit or implicit initiatives to improve school climate or coexistence are the first step toward enhancing students' performance and psychological attention to the students (Durlak, Weissbergm, Dymnicki, Taylor, & Schellinger, 2011).

Regarding the limitations of this study, it can be mentioned the self-reported character of the instrument used. So, students' perception may not necessarily reflect the reality of the educational unit in the various dimensions examined. However, knowing the reality lived for each student, be this more or less "objective", is necessary to intervene in order to get a good adaptation between the student and the school. In addition, the unbalance between public and subsidized educational establishments schools should make us be careful regarding the generalizability of the obtained results.

Acknowledgments

This research received funding from Chilean Fondecyt Grant 11150201, CONICYT, and PIA-CONICYT Basal Funds for Centers of Excellence Project FB0003.

References

Arens, K., Morin, A., & Watermann, R. (2015). Relations between classroom disciplinary problems and student motivation: Achievement as a potential mediator? *Learning and Instruction*, *39*, 184–193. http://dx.doi.org/10.1016/j.learninstruc.2015.07.001

Arslam, S., Hallet, V., Akkas, E., & Akkas, O. A. (2012). Bullying and victimization among Turkish children and adolescents: Examining prevalence and associated health symptoms. *European Journal of Pediatrics*, *171*(10), 1549–1557. http://dx.doi.org/10.1007/s00431-012-1782-9

Bellei, C. (2013). El estudio de la segregación económica y académica de la educación chilena. *Estudios Pedagógicos*, *39*(1), 325–345. http://dx.doi.org/10.4067/S0718-07052013000100019

Benson, N., Kranzler, J., & Floyd, R. (2016). Examining the integrity of measurement of cognitive abilities in the prediction of achievement: Comparisons and contrasts across variables from higher-order and bifactor models. *Journal of School Psychology*, *58*, 1–19. http://dx.doi.org/10.1016/j.jsp.2016.06.001

Bentler, P. M. (2006). *EQS 6 Structural equations program manual*. Encino, CA: Multivariate Software, Inc.

Berkowitz, R., Glickman, H., Benbenishty, R., Ben-Artzi, E., Raz, T., Lipshtadt, N., & Astor, R. A. (2015). Compensating, mediating, and moderating effects of school climate on academic achievement gaps in Israel. *Teachers College Record*, *117*(7), 1–34.

Brand, S., Felner, R., Seitsinger, A., Burns, A., & Bolton, N. (2008). A large scale study of the assessment of the social environment of middle and secondary schools: The validity and utility of teachers' ratings of school climate, cultural pluralism, and safety problems for understanding school effects and school improvement. *Journal of School Psychology*, *46*(5), 507–535. http://dx.doi.org/10.1016/j.jsp.2007.12.001

Brault, M. C., Janosz, M., & Archambaul, M. (2014). Effects of school composition and school climate on teacher expectations of students: A multilevel analysis. *Teaching and Teacher Education*, *44*, 148–159. http://dx.doi.org/10.1016/j.tate.2014.08.008

Browne, M., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. Bollen, & J. Long (Eds.), *Testing structural equation models* (pp. 136–162). Beverly Hills, CA: Sage.

Castro-Morera, M., García-Medina, A., Pedroza-Zúñiga, H., & Caso-Niebla, J. (2015). Escuelas de enseñanza media y valor añadido bajo. Perfiles diferenciales de escuelas secundarias en Baja California. *Education Policy Analysis/Archivos Analíticos de Políticas Educativas*, *23*(67), 1–27. http://dx.doi.org/10.14507/epaa.v23.1917

Cerezo, F., & Ato, M. (2010). Social status, gender, classroom climate and bullying among adolescent pupils. *Anales de Psicología*, *26*, 137–144. http://dx.doi.org/10.6018/92131

Cohen, J., McCabe, L., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teachers College Record*, *111*(1), 180–213.

Córdoba, F., Del Rey, R., & Ortega, R. (2014). Convivencia escolar en España: una revisión histórico-conceptual. *Revista Confluencia*, *2*, 199–221.

Cornell, D., Shukla, K., & Konold, T. (2016). Authoritative school climate and student academic engagement, grades, and aspirations in middle and high schools. *AERA Open*, *2*(2), 1–18. http://dx.doi.org/10.1177/2332858416633184

De Pedro, K. T., Gilreath, T., & Berkowitz, R. (2016). A latent class analysis of school climate among middle and high school students in California public schools. *Children and Youth Services Review*, *63*, 10–15. http://dx.doi.org/10.1016/j.childyouth.2016.01.023

Del Rey, R., Casas, J. A., & Ortega-Ruiz, R. (2017). Desarrollo y validación de la Escala de Convivencia Escolar (ECE). *Universitas Psychologica*, *16*(1), 1–11. http://dx.doi.org/10.11144/Javeriana.upsy16-1.dvec

Díaz-Aguado, M. J., & Martín, G. (2011). Convivencia y aprendizaje escolar en la adolescencia desde una perspectiva de género. *Psicothema*, *23*(2), 252–259.

Djigic, G., & Stojiljkovic, S. (2011). Classroom management styles, classroom climate and school achievement. *Procedia Social and Behavioral Sciences*, *29*, 819–828. http://dx.doi.org/10.1016/j.sbspro.2011.11.310

Durlak, J., Weissbergm, R., Dymnicki, A., Taylor, R., & Schellinger, K. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, *82*, 405–432. http://dx.doi.org/10.1111/j.1467-8624.2010.01564.x

Elipe, P., Casas, J. A., Del Rey, R., Ortega-Ruiz, R., Cerda, G., & Pérez, C. (2018). Validation and cross-cultural robustness of the School-wide Climate Scale (SCS) across Spanish and Chilean students. *Studies in Educational Evaluation*, *56*, 182–188. http://dx.doi.org/10.1016/j.stueduc.2018.01.002

Elsaesser, C., Gorman-Smith, D., & Henry, D. (2013). The role of the school environment in relational aggression and victimization. *Journal of Youth and Adolescence*, *42*, 235–249. http://dx.doi.org/10.1007/s10964-012-9839-7

Finney, S. J., & DiStefano, C. (2006). Non-normal and categorical data in structural equation modeling. In G. R. Hancock, & R. O. Mueller (Eds.), *Structural equation modeling: A second course* (pp. 269–314). Greenwich, Connecticut: Information Age Publishing.

Flora, D., & Curran, P. (2004). An empirical evaluation of alternative methods of estimation for confirmatory factor analysis with ordinal data. *Psychological Methods*, *9*(4), 466–491. http://dx.doi.org/10.1037/1082-989X.9.4.466

Frugård Strøm, I., Thoresen, S., Wentzel-Larsen, T., & Dyb, G. (2013). Violence, bullying and academic achievement: A study of 15-year-old adolescents and their school environment. *Child Abuse & Neglect*, *37*, 243–251. http://dx.doi.org/10.1016/j.chiabu.2012.10.010

Goddard, R., Goddard, Y., Sook Kim, E., & Miller, R. (2015). A theoretical and empirical analysis of the roles of instructional leadership, teacher collaboration, and collective efficacy beliefs in support of student learning. *American Journal of Education*, *121*(4), 501–530.

Høigaard, R., Kovač, V. B., Øverby, N. C., & Haugen, T. (2015). Academic self-efficacy mediates the effects of school psychological climate on academic achievement. *School Psychology Quarterly*, *30*(1), 64–74. http://dx.doi.org/10.1037/spq0000056

Hopson, L. M., & Lee, E. (2011). Mitigating the effect of family poverty on academic and behavioral outcomes: The role of school climate in middle and high school. *Children and Youth Services Review*, *33*, 2221–2229. http://dx.doi.org/10.1016/j.childyouth.2011.07.006

Jiménez, T. I., Estévez, E., & Murgui, S. (2014). Ambiente comunitario y actitud hacia la autoridad: Relaciones con la calidad de las relaciones familiares y con la agresión hacia los iguales en adolescentes. *Anales de Psicología*, *30*(3), 1086–1095. http://dx.doi.org/10.6018/analesps.30.3.160041

Jiménez, T. I., & Lehalle, H. (2012). La violencia escolar entre iguales en alumnos populares y rechazados. *Psychosocial Intervention*, *21*(1), 77–89. http://dx.doi.org/10.5093/in2012v21n1a5

Kaynak, O., Lepore, S., Kliewer, W., & Jaggi, L. (2015). Peer victimization and subsequent disruptive behavior in school: The protective functions

of anger regulation coping. *Personality and Individual Differences*, *73*, 1–6. http://dx.doi.org/10.1016/j.paid.2014.09.012
Khoury-Kassabri, M. (2011). Student victimization by peers in elementary schools: Individual, teacher-class, and school-level predictors. *Child Abuse Neglect*, *35*, 273–282. http://dx.doi.org/10.1016/j.chiabu.2011.01.004
Kodzi, I., Oketch, M., Ngware, M., Mutisya, M., & Nderu, E. (2014). Social relations as predictors of achievement in math in Kenyan primary schools. *International Journal of Educational Development*, *39*, 285–292. http://dx.doi.org/10.1016/j.ijedudev.2014.02.007
Košir, K., & Tement, S. (2014). Teacher–student relationship and academic achievement: A cross-lagged longitudinal study on three different age groups. *European Journal of Psychology of Education*, *29*(3), 409–428. http://dx.doi.org/10.1007/s10212-013-0205-2
Kraft, M. A., Marinell, W. H., & Yee, D. S. (2016). School organizational contexts, teacher turnover, and student achievement: Evidence from panel data. *American Educational Research Journal*, *53*(5), 1411–1449. http://dx.doi.org/10.3102/0002831216667478
LaRusso, M., & Selman, R. (2011). Early adolescent health risk behaviors, conflict resolution strategies, and school climate. *Journal of Applied Developmental Psychology*, *32*(6), 354–362. http://dx.doi.org/10.1016/j.appdev.2011.05.003
López, V., Bilbao, M., & Rodríguez, J. (2011). La sala de clases sí importa: Incidencia del clima de aula sobre la percepción de intimidación y victimización entre escolares. *Universitas Psychologica*, *11*(1), 91–101. http://dx.doi.org/10.11144/1002
Manota, M., & Melandro, M. (2016). Clima de aula y buenas prácticas docentes con adolescentes vulnerables: Más allá de los contenidos académicos. *Contextos Educativos*, *19*, 55–74. http://dx.doi.org/10.18172/con.2756
Mardia, K. V. (1970). Measures of multivariate skewness and kurtosis with applications. *Biometrika*, *57*, 519–530. http://dx.doi.org/10.1093/biomet/57.3.519
Maxwell, L. (2016). School building condition, social climate, student attendance and academic achievement: A mediation model. *Journal of Environmental Psychology*, *46*, 206–216. http://dx.doi.org/10.1016/j.jenvp.2016.04.009
McMahon, S. D., Wernsman, J., & Rose, D. (2009). The relation of classroom environment and school belonging to academic self-efficacy among urban fourth- and fifth-grade students. *The Elementary School Journal*, *109*, 267–281. http://dx.doi.org/10.1086/592307
Meristo, M., & Eisenschmidt, E. (2014). Novice teachers' perceptions of school climate and self-efficacy. *International Journal of Educational Research*, *67*, 1–10. http://dx.doi.org/10.1016/j.ijer.2014.04.003
Mitchell, M., & Bradshaw, C. (2013). Examining classroom influences on student perceptions of school climate: The role of classroom management and exclusionary discipline strategies. *Journal of School Psychology*, *51*, 599–610. http://dx.doi.org/10.1016/j.jsp.2013.05.005
O'Malley, M., Voight, A., Renshaw, T., & Eklnd, K. (2015). School climate, family structure, and academic achievement: A study of moderation effects. *School Psychology Quarterly*, *30*(1), 142–157. http://dx.doi.org/10.1037/spq0000076
Rosas, R., & Santa Cruz, C. (2013). *Dime en qué colegio estudiaste y te diré qué CI tienes*. Santiago de Chile: Ediciones UC.
Satorra, A., & Bentler, P. (2001). A scaled difference chi-square test statistic for moment structure analysis. *Psychometrika*, *66*(4), 507–514. http://dx.doi.org/10.1007/BF02296192
Schenke, K., Lam, A. M., Conley, A., & Karabnick, S. (2015). Adolescents' help seeking in mathematics classrooms: Relations between achievement and perceived classroom environmental influences over one school year. *Contemporary Educational Psychology*, *41*, 133–146. http://dx.doi.org/10.1016/j.cedpsych.2015.01.003
Schumacher, R., & Lomax, R. (1996). *A beginner's guide to structural equation modeling*. New Jersey, NJ: Lawrence Erlbaum.
Steffgen, G., Recchia, S., & Viechtbauer, W. (2013). The link between school climate and violence in school: A meta-analytic review. *Aggression and Violent Behavior*, *18*(2), 300–309. http://dx.doi.org/10.1016/j.avb.2012.12.001
Tapha, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, *83*(3), 357–385. http://dx.doi.org/10.3102/0034654313483907
Treviño, E., Place, K., & Gempp, R. (2012). *Análisis del clima escolar: Poderoso factor que explica el aprendizaje en América Latina y el Caribe*. Santiago, Chile: UNESCO-OREALC.
Villarreal-González, M., Sánchez-Sosa, J. C., Veiga, F., & del Moral, G. (2011). Contextos de desarrollo, malestar psicológico, autoestima social y violencia escolar desde una perspectiva de género en adolescentes mexicanos. *Intervención Psicosocial*, *20*(2), 171–181. http://dx.doi.org/10.5093/in2011v20n2a5
Walkey, F., McClure, J., Meyer, L., & Weir, K. (2013). Low expectations equal no expectations: Aspirations, motivation, and achievement in secondary school. *Contemporary Educational Psychology*, *38*, 306–315. http://dx.doi.org/10.1016/j.cedpsych.2013.06.004
Wang, M. T., & Degol, J. L. (2016). School climate: A review of the construct, measurement, and impact on student outcomes. *Educational Psychology Review*, *28*(2), 315–352. http://dx.doi.org/10.1007/s10648-015-9319-1
Wang, M. T., & Eccles, J. (2013). School context, achievement motivation, and academic engagement: A longitudinal study of school engagement using a multidimensional perspective. *Learning and Instruction*, *28*, 12–23. http://dx.doi.org/10.1016/j.learninstruc.2013.04.002
Wang, M. T., & Holcombe, R. (2010). Adolescents' perceptions of school environment, engagement, and academic achievement in middle school. *American Educational Research Journal*, *47*(3), 633–662. http://dx.doi.org/10.3102/0002831209361209
Way, S. M. (2011). School discipline and disruptive classroom behavior: The moderating effects of student perceptions. *The Sociological Quarterly*, *52*, 346–375. http://dx.doi.org/10.1111/j.1533-8525.2011.01210.x
Zaykowski, H., & Gunter, W. (2012). Youth victimization: School climate or deviant lifestyles? *Journal of Interpersonal Violence*, *27*(3), 431–452. http://dx.doi.org/10.1177/0886260511421678
Zimmer-Gembeck, M., Chipuer, H., Hanisch, M., Creed, P., & McGregor, L. (2006). Relationships at school and stage-environment fit as resources for adolescent engagement and achievement. *Journal of Adolescence*, *29*, 911–933. http://dx.doi.org/10.1016/j.adolescence.2006.04.008
Zullig, K. J., Koopman, T. M., Patton, J. M., & Ubbes, V. A. (2010). School climate: Historical review, instrument development, and school assessment. *Journal of Psychoeducational Assessment*, *28*, 139–152. http://dx.doi.org/10.1177/0734282909344