

Students' views on teacher-students relation in Greece: What can we learn from PISA?**KAROLINA RETALI, POLYXENI MANOLI, VASSILIA HATZINIKITA**

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Abstract: The present study examined factors related to 15-year-old students' views on teacher-students relation in Greece, both at student level and school level. The data of the study derived from the Programme for International Student Assessment (PISA) 2009 and the sample, which is nationally representative, consists of 4,969 15-year-old students from 184 schools. Main findings indicated that there is a positive, statistically significant, relation between students' views on teacher-students relations and their reading achievement but no statistically significant link between students' views on teacher-student relations and SES. Girls were found with more positive views on teacher-student relations than boys, even after controlling for reading achievement and SES, and first-generation immigrant students had more positive views on teacher-student relations than native-born students.

Keywords: Teacher-students relations, students' views, Greece, PISA

Introduction

Research has shown that positive teacher-student relations can facilitate student learning and motivation (e.g., Cornelius-White, 2007; Finn et al., 2009; Hattie, 2009). The type of relationships developed between teachers and students have attracted educators' and researchers' attention for decades (Sabol & Pianta, 2012). Student-teacher relation refers to students' perceptions of how well they get on with their teacher (Cresswell, 2004). Good relationships are characterized by low levels of conflict and high levels of closeness and support (Davis, 2003). Positive teacher-student relation is important for the development of an environment that is conducive to learning (Bernstein-Yamashiro & Noam, 2013; OECD, 2010; Roorda et al, 2011).

In particular, a great deal of research has indicated that having a good relationship with teachers facilitates affective learning, which, in turn, contributes to students' cognitive learning and academic achievement enhancing, thus, their motivation to learn (Barile et al., 2012; Brekelmans, Wubbels, & den Brok, 2002; Crosnoe, Johnson, & Elder, 2004; Furrer & Skinner, 2003; Goodenow, 1993; Gregory & Weinstein, 2004; Jennings & Greenberg, 2009; Klem & Connell, 2004; McCornick et al, 2013; Midgley, Feldlaufer, & Eccles, 1989; Neuliep, 1995; Ryan & Patrick, 2001). Teacher-student interpersonal behavior is viewed also as an important factor related to behavioral outcomes and order in the classroom. In particular, research has shown that students who were in a closer relationship with teachers had fewer behavioral problems, were less likely to get in trouble in school, developed greater social competencies and had better school adjustment than did children experiencing greater conflict in their relationships (Brackett, Reyes, Rivers, Elbertson, & Salovey, 2011; Crosnoe et al., 2004; Jennings & Greenberg, 2009; Murray & Greenberg, 2000; Pianta & Steinberg, 1992; Ryan & Patrick, 2001; Wang, Selman, Dishion, & Stormshak, 2010). A meta-analysis conducted by Cornelius-White (2007) also corroborated the above findings indicating that positive teacher-student relations are associated with positive student learning, affective or

behavioral outcomes. Moreover, Van Petegem, Aelterman, Van Keer, and Rosseel (2008) revealed an association between a positive teacher-student relationship and student wellbeing.

In fact, relationships between teachers and children operate as a complex constellation influenced by a number of factors. Studies examining differences in student ratings of their teacher relationship have shown that a number of student, class, teacher, and school variables are related to students' perception of their teacher relationship (Mikk et al, 2016), and therefore student and school variables constitute the focus of the current study.

Research revealed gender differences in the way students perceive their relations with teachers. More specifically, Fan, Williams, and Corkin (2011) found that female students tended to regard their relationship with teachers as more supportive and warmer than male students. Similarly, Jerome, Hamre, and Pianta (2009) indicated that girls tended to experience more favorable relationships with teachers from the first years at school than boys, while the gap between closeness ratings for girls and boys increased over the later elementary school years. The above findings are in line with previous research which indicated that girls at both the primary and secondary levels tended to form closer and less conflictual relationships with their teachers than did boys (Bracken & Crain, 1994; Crosnoe et al., 2004; Fisher, den Brok, & Rickards, 2006; Levy, den Brok, Wubbels, & Brekelmans, 2003; Ma & Willms, 2004; Ryan, Stiller, & Lynch, 1994).

In addition, academic achievement has been viewed as a significant component of teacher-student relationships. More specifically, Jerome et al. (2009) revealed that higher academic achievement scores predicted less initial conflict and greater initial closeness with teachers, as children who started school with lower achievement scores not only had greater conflict and less closeness to teachers but continued to have lower quality relationships with teachers through the sixth grade. Košir, Sočan, and Pečjak (2007) also demonstrated that relations with teachers were associated with students' academic outcomes in all periods of schooling and were independent of age. Eisenhower, Baker, and Blacher (2007) provided evidence that less academically competent children tended to develop poorer relationships with their teachers compared to their more academically competent peers. Fisher and al. (2006) showed that students' views on their relationship with teachers are related to their academic achievement. However, at this point it should be mentioned that most studies examined the effect of perceptions of teacher relationship on student learning outcomes and not vice versa (Brekelmans et al., 2002; Crosnoe et al., 2004; Furrer & Skinner, 2003; Goodenow, 1993; Gregory & Weinstein, 2004; Hughes, 2011; Jennings & Greenberg, 2009; Klem & Connell, 2004; Midgley et al., 1989; Mikk et al, 2016; Neuliep, 1995; Ryan & Patrick, 2001), which highlights the need for further research.

Moreover, research has investigated the association between ethnic and cultural variables on students' perceptions of teacher-students relation, as, nowadays, classrooms are becoming increasingly multicultural. Perceptions may differ according to the immigrant background of the student and the language spoken at student home (Brekelmans, den Brok, Tartwijk, & Wubbels, 2005). Research findings seem to be rather inconsistent, as considerable differences in the way student view their teacher relationship have been revealed between countries, which requires further research (Mikk et al., 2016). In particular, Evans and Fisher (2000) demonstrated statistically significant differences between students from different cultural backgrounds and their perceptions of student-teacher interactions, as students with Asian, Chinese, Indian or South African cultural backgrounds had significantly different perceptions of student-teacher interactions from their native Australian peers. Further studies conducted in the USA indicated that Hispanic students rated their American teachers higher than their Asians and African-American counterparts (den Brok, Levy, Rodriguez, Wubbels, 2002). A more recent study (Barile et al., 2012) showed that schools with higher proportions of students identifying as Black or African American, and with greater

proportions of students of various ethnicity or race exhibited lower teacher-student relationship ratings. However, Ma and Willms (2004) indicated that Asians or Pacific Islanders, Hispanics, and Blacks reported more favorable teacher-student relations than did native Americans or Whites. Similarly, Cresswell (2004) indicated that non-native students and students from non-English speaking home backgrounds compared to native students had a more positive view on the support and help they received from their teachers explaining that students of immigrant status are likely to hold such a positive and engaged approach to their learning in order to overcome some of the disadvantages associated with settling into a new country.

In addition to the ethnic group membership, other indicators of the ethnic background seem to display important effects. Primary home language was found to be related to student perceptions of their relationship with their teachers. In particular, Evans and Fisher (2000) indicated that the students coming from homes where the Chinese-based languages were dominant perceived interactions with their Australian teachers more positively than did students from other cultural backgrounds, though this finding was not consistent (Levy et al., 2003). Cresswell (2004) also demonstrated that students from non-English speaking home backgrounds perceived higher levels of teacher support and generally had a positive experience of their teachers than their native peers. However, in another study (Fisher et al., 2006), it was shown that students speaking mainly English at home, the official language of their country, regarded their teachers as more cooperative, which provides support for previous studies (Levy, Wubbels, Brekelmans, & Morganfield, 1997; Levy et al., 2003). It seems that research findings are rather inconclusive pointing to the complex nature of the specific variable and its interactions with other variables, which requires future investigation (Levy et al., 2003).

Another factor that seems to be associated with student perceptions of their teacher relationship is their socioeconomic status (SES). More specifically, early research provided support for the effect of student SES on teacher-student interactions (Harvey & Slatin, 1975). Ma and Willms (2004) demonstrated that students from high SES tended to have a better relationship with their teachers providing small but statistically significant effects of student SES, which is in line with the tenor of other studies (Pianta et al., 2002). Similarly, a more recent study (Barile et al., 2012) revealed that students coming from lower SES families were more likely to provide negative assessments of the teacher-student relationship corroborating the findings of previous research. Moreover, PISA examining the student SES and their relationship with teachers found that students from socio-economically advantaged backgrounds usually brought with them a more positive perceptions of the teacher-relationship (OECD, 2010).

Overall, research exploring the impact of student variables, such as gender, academic achievement, immigrant status, home language, and SES, on their views on teacher-students relations provided inconsistent findings pointed to the need for further investigation, while some studies that showed an association between the above variables and students' perceptions, indicated that none were overwhelming in their effect highlighting that student perceptions are the result of a complex interplay of factors (Fisher et al., 2006; Levy et al., 2003).

In addition to student-related factors, school-related factors have been the focus of some researchers, as teachers and students do not interact in isolation but they belong to a larger school community, which may promote or impede the development of a positive relationship (Hamre & Pianta, 2006). Research, though limited in this area, seems to reveal that school-level factors, such as the school type (private or public) and school-average SES, and teacher-student ratio are associated with the quality of teacher-student relationship. More specifically, research indicated that private schools were more conducive to the development of a closer teacher-student relationship than did public schools, as they are less stratified and more intimate (Finn & Voelkl, 1993; Johnson,

Crosnoe, & Elder, 2001; Lee & Smith, 1993). A later study conducted by Crosnoe and his colleagues (2004) corroborated the findings of previous research highlighting that students in private schools viewed their relationships with teachers more positively, though this association was only marginally significant.

Moreover, school-average SES is linked to student bonding with teachers, as studies demonstrated that schools with higher average student SES exhibited a more positive teacher-student relationship highlighting that the higher the school SES the better the teacher-student relationship (Barile et al., 2012; Harvey & Slatin, 1975). Furthermore, the teacher-student ratio seems to be related to students' perceptions of their relationship with their teachers. Finally, students attending urban schools were more likely to report less affective ties with their teachers and drop out than students in suburban schools (Barile et al., 2012). However, at this point it should be mentioned that some researchers failed to provide evidence on the school-level variables associated with students' perceptions of their relationship with teachers, pointing out that school-level factors have not been the focus of separate analyses in earlier studies (Den Brok et al., 2003; Levy et al., 2003). Some researchers explained that most of the variance in students' perceptions of the relationship with their teachers was located at the student level (approximately 70%), while the remainder related to class, teacher, and school of which teacher-level factors were most prominent (Brok et al., 2003; Brekelmans et al., 2005; Levy et al., 2003).

Taking everything into account, studies focusing on the students' views on teacher-students relation suggest that they are the result of a complex interplay of a number of individual and school-related factors (e.g., Fan et al., 2011; Fisher et al., 2006; Koth et al., 2008; Levy et al., 2003; Vieno et al., 2005). However, allowing for the rather inconsistent findings provided by pertinent literature and the research evidence on the contribution of positive teacher-student relations to student learning and behavioral outcomes (e.g., Barile et al., 2012; Cornelius-White, 2007; Crosnoe et al., 2004; Finn et al., 2009, Goodenow, 1993; Hattie, 2009; Jennings & Greenberg, 2009; Murray & Greenberg, 2000; OECD, 2010; Wang et al., 2010), further research is needed on the variables that affect the way students perceive their teacher relationship so that future interventions should be organized more efficiently.

Overall, international research has shown that most times positive teacher-student relations can facilitate student learning and motivation (Cornelius-White, 2007; Finn et al., 2009; Hattie, 2009). A number of studies (Crosnoe, Elder, & Johnson, 2004; Van Maele & Van Houtte, 2011; Van Petegem et al., 2008) have indicated that teacher-student relations can be influenced by individual characteristics such as gender, immigrant status, socio-economic status and schools' compositional characteristics such as school orientation and school type. The above mentioned findings are consistent with Bronfenbrenner's (1979) ecological systems theory, where he argued that individuals belong to various environments and levels that are intertwined and influenced by each other. However, it was found that there is limited research on national assessment of psycho-social characteristics of students in Greece and in particular student-teacher relations (e.g., Tsigilis, Gregoriadis, Grammatikopoulos & Zachopoulou, 2018; Tsigilis, Gregoriadis, & Grammatikopoulos, 2017). Moreover, there has not been any in depth secondary analysis of PISA 2009 psycho-social variables regarding Greece and in particular students' view on teacher-students relation. Therefore, the present study analysed nationally representative data for Greece from PISA 2009 and examined differences in students' views on teacher-student relation, exploring the association between students' views on teacher-student relation and various individual-level variables and, for the first time, school-level variables.

More specifically, the research questions of the current study are:

- 1) Are students' views on teacher-student relation linked to their gender, individual and school-average achievement and individual and school-average socio-economic status?
- 2) Is school's orientation, school type and teacher-student ratio linked to students' views on teacher-student relation?
- 3) Do immigrant students in Greece report having worse teacher-student relations than their native-born counterparts and is this related to their country of origin and language spoken at home?

Methodology

Data

The present study uses the Programme for International Student Assessment (PISA) database. PISA is a cross-sectional international assessment implemented every three years by the Organisation for Economic Cooperation and Development (OECD). PISA assesses mainly students' ability to use knowledge and skills acquired in reading, mathematics and science in everyday life (OECD, 2009). The data from PISA 2009 for Greece were used for the purposes of the current study. The sample consists of 4,969 15-year-old students (nationally representative) from 184 schools.

Research Instruments

In PISA 2009, all students were given items assessing reading achievement, and with different combinations students were also given items assessing mathematics and/or science achievement. Questions included both multiple-choice items and open-ended questions. The questions were organised around texts and often included pictures or tables presenting real-life situations¹. Each subject was tested using a wide range of tasks with different levels of difficulty. Results in each subject were converted into a scale with an average mean for all the participating countries of 500 and a standard deviation of 100 test-score points. Furthermore, students had to complete a 20-minute questionnaire providing information about individual and family background, their attitudes to learning and towards environment. School head-teachers completed also a 20-minute questionnaire informing of characteristics of their schools² (OECD, 2009).

Variables included in the model

Students' views on teacher-students relations in PISA 2009 from Greece were examined, with various factors included in the model. The dependent variable of the study was standardised PISA students' views on teacher-student relations index, as measured by PISA 2009 ($M= 0$, $SD= 1$). PISA students' view on teacher-student relations index comprised of the following statements in a 4point Likert scale (strongly disagree to strongly agree): a) I get along with most of my teachers, b) Most of my teachers are interested in my well-being, c) Most of my teachers really listen to what I have to say, d) If I need extra help I will receive it from my teachers and e) Most of my teachers treat me fairly.

The independent variables included in the model were: a) gender, b) immigrant status (first/second generation), c) standardised PISA index of individual and school-average socio-economic status

¹Examples of PISA 2009 reading items are available at the OECD website (<http://www.oecd.org/pisa>) and at the Institute of Education Policy of Greece' website (<http://www.iep.edu.gr/pisa>). OECD does not release all the test items used in PISA surveys, as these items have undergone rigorous procedures to ensure comparability across countries, which require much time, effort and economical resources. Therefore, most cognitive items are kept confidential, in order to be reused in other PISA surveys. However, the cognitive items released as examples from the OECD must be indicative of the type of items used in PISA surveys.

²The questionnaires that were distributed to the students and the school head-teachers are available at the OECD website (<http://www.oecd.org/pisa>).

(SES), d) individual reading achievement and school-average reading achievement, as measured by PISA 2009, e) school orientation (general/vocational), f) school type (private/public), g) language mostly spoken at home, h) country of origin, i) teacher-student ratio.

PISA SES index was standardised before it was included in the analysis, with a mean of zero and a standard deviation of one. PISA index of overall SES consists of three indexes measuring parents' occupation, parents' education, and home possessions. Open-ended questions were used to gather information on parents' occupation. Students' responses were then coded according to the International Standard Classification of Occupations (ISCO) (International Labour Organisation, 1990). After coding parental occupation into ISCO, the codes were re-coded into the International Socio-Economic Index of Occupational Status (ISEI) (Ganzeboom, De Graaf & Treiman, 1992), which provides a measure of the SES of occupations comparable across the PISA countries. In addition, in order to get comparable data across countries for parents' education, the International Standard Classification of Education (ISCED) (OECD, 1999) was used to classify educational qualifications and study programmes (see technical report in OECD, 2012). Home possessions include sub-scales measuring wealth, home educational resources and cultural possessions. Reading achievement in PISA is defined as "an individual's capacity to: understand, use, reflect on and engage with written texts, in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society" (OECD, 2009, p. 14). School-average SES and reading achievement consists of the average SES and reading achievement of students in PISA data from Greece attending each school.

Method of analysis

The database used in the present study was gathered taking into account that students are grouped within schools and therefore influenced by them; thus, the database includes both individual and school level variables. Therefore, a multilevel modelling analysis was conducted, which is considered the most appropriate method for the analysis of the associations of the independent variables with the dependent variable, as it is not overlooking the contextual effects (Snijders & Bosker, 2004). The statistical programme MLwiN 2.27 (Rasbash, Steele, Browne, & Prosser, 2013) was used. Variances at different levels are separated, and the different effects of individual and group level variables on the outcome variable are distinct (Gelman & Hill, 2006; Snijders & Bosker, 2004). Standardised weights provided by PISA were used in the present study, in order to account for the complex survey design (OECD, 2012).

Results

First, the variation in students' views on teacher-students relation between schools and students in Greece was explored. Therefore, the variance components model (or null model) was estimated for a two-level model (student and school level, see Table 1, M0). The outcome variable included in the model was students' views on teacher-student relations index provided by PISA 2009 standardised. Based on the variance components model, the intra-class correlation (ICC) was calculated. The intra-class correlation (school-level) showed that only 5,6% of the variance in PISA students' views on teacher-students relation can be linked to differences between schools in Greece. Subsequently, 94,4% of the variance in students' attitudes towards teachers can be attributed to differences between students in Greece.

Gender

Next, gender was included in the model in order to examine any differences in students' attitudes towards teachers related to gender. Findings indicated that male students reported more negative

beliefs about teacher-student relation (-0.185 , $SE= 0.028$) than female students (see Table 1, M1). This statistically significant finding remained even after taking into account students' reading achievement and socio-economic status (see Table 1, M2), with only a small decrease in the effect (-0.144 , $SE= 0.029$). In other words, boys tend to have a more negative view of teachers compared to girls, even when comparing those with similar achievement in reading and socio-economic status. Furthermore, school-average reading achievement and individual and school-average socio-economic status were not found to have a statistically significant association with students' views on teacher-student relation (see Table 1, M2). However, individual reading achievement seems to be positively related to students' view of teacher-student relation, with a statistically significant effect (0.115 , $SE= 0.018$) when controlling for the other factors in the model. Therefore, it seems that students with higher achievement tend to have more positive attitudes towards teachers.

Table 1

Differences in students' views on teacher-student relation in Greece based on gender

	M0: Intercept-only		M1:+ Gender		M2:+ Reading achievement & SES	
	Coefficients	SE	Coefficients	SE	Coefficients	SE
Intercept	-0.002	0.023	0.092	0.027	0.073	0.027
Male students			-0.185*	0.028	-0.144*	0.029
Reading achievement					0.115*	0.018
School-average achievement					-0.018	0.033
SES-I					0.006	0.017
SES-SCH					-0.038	0.037
Student variance	0.945	0.025	0.936	0.025	0.927	0.025
School variance	0.056	0.011	0.056	0.011	0.056	0.011
Deviance	13909.954		13866.876		13809.676	

* $p < 0.05$

Note: Female students are the reference category in the model for variable measuring gender. SES-I stands for standardised PISA index of socio-economic status and SES-SCH for school-average PISA index of socio-economic status.

School orientation

Next, the association between students' views on teacher-student relation and the orientation of the school (general school/vocational school) were explored. No statistically significant finding was noted between students' views on teacher-student relation based on school orientation. In other words, students' views of their relation with teachers did not differ significantly between those attending general schools and vocational schools (see Table 2, M1). In addition, controlling for individual and school-average socio-economic status did not alter the findings (see Table 2, M2).

Table 2
Students' view on teacher-student relation, based on school orientation

	M0: Intercept-only		M1:+ School orientation		M2: + SES	
	Coefficients	SE	Coefficients	SE	Coefficients	SE
Intercept	-0.002	0.023	0.008	0.025	0.008	0.024
Vocational school			-0.043	0.060	-0.043	0.071
SES-I					0.018	0.017
SES-SCH					-0.010	0.031
Student variance (σ_e^2)	0.945	0.025	0.945	0.025	0.944	0.025
School variance (σ_u^2)	0.056	0.011	0.056	0.011	0.055	0.011
Deviance	13909.954		13909.551		13896.545	

* $p < 0.05$

Note: General school is the reference category in the model for variable measuring school orientation. SES-I stands for standardised PISA index of socio-economic status and SES-SCH for school-average PISA index of socio-economic status.

Next, the school type (private/public) was added to the null model in order to examine any association between school type and students' attitudes towards teachers.

School type

Therefore, in order to examine whether students' attitudes towards teachers would differ by group membership, a multilevel model tested for students attending different type of schools (private/public schools) and subsequently controlled for individual and school-average SES and reading achievement (see Table 3).

Findings showed students attending private schools tend to have statistically significant more positive views on their teacher-student relation (0.538, $SE = 0.085$) comparing to their counterparts attending public schools (see Table 3, M1). This large difference noted in students' attitudes towards teachers based on school type (private/public schools) remained significant -and even increased- after controlling for individual and school-average SES (see Table 3, M2). Furthermore, when controlling for individual and school-average achievement, differences remained statistically significant, with students attending private schools having a more positive view on teacher-student relation than those attending public schools even with similar achievement and socio-economic background (see Table 3, M3).

Table 3

Differences in students' view on teacher-student relation, based on school type, controlling for SES and achievement

	M1:+ School type		M2:+ SES		M3: + Achievement	
	Coefficients	SE	Coefficients	SE	Coefficients	SE
Intercept	-0.033	0.021	-0.043	0.021	-0.045	0.020
Private school	0.538*	0.085	0.646*	0.087	0.679*	0.093
SES-I			0.018	0.017	-0.004	0.017
SES-SCH			-0.069*	0.021	-0.119*	0.027
Achievement					0.136*	0.018
School achievement					0.002	0.030
Student variance (σ_e^2)	0.945	0.025	0.944	0.025	0.932	0.025
School variance (σ_u^2)	0.038	0.007	0.035	0.007	0.032	0.007
Deviance	13872.294		13851.532		13783.210	

* $p < 0.05$

Note: Public school is the reference category in the model for variable measuring school type. SES-I stands for standardised PISA index of socio-economic status and SES-SCH for school-average PISA index of socio-economic status.

Immigrant background

As seen earlier in the literature review of the present study, exploring immigrants' views on teacher-student relation is particularly interesting, as research indicates that immigrant background could be a predictor factor. In addition, Greece is a country that had until recently a high degree of cultural homogeneity and only the last decades started receiving a large number of immigrants, mainly from Albania and the former Soviet republics, and lately refugees. Therefore, schools in Greece have amassed a large number of immigrant students but might not have provided the necessary support and provision to this diverse population.

Multilevel model analysis was conducted in order to examine differences in students' view on teachers between immigrant and non-immigrant students. The first model included a variable measuring immigrant background, with a distinction made between first, second-generation immigrants and native-born students (see Table 4, M1). The main effect of immigrant status was significant and positive for first-generation immigrant students (0.129, $SE= 0.068$), indicating that first-generation students seem to hold a more positive view of teacher-students relation compared to their native-born counterparts. Differences remained positive and significant for first-generation immigrant students even after controlling for individual and school-average SES and achievement in reading (0.166, $SE= 0.073$). Therefore, after taking into account differences in SES and achievement, first-generation immigrant students tend to hold more positive view of teachers compared to their counterparts (see Table 4, M2 & M3).

Table 4
Students' view on teachers based on immigrant background, controlling for SES and reading achievement

	M1:+ Immigrant status		M2:+ SES		M3:+ Achievement	
	Coefficients	SE	Coefficients	SE	Coefficients	SE
Intercept	-0.002	0.023	-0.005	0.024	-0.005	0.024
Second-generation	-0.033	0.093	-0.027	0.093	-0.028	0.093
First-generation	0.129*	0.068	0.141*	0.071	0.166*	0.073
SES-I			0.020	0.017	-0.001	0.017
SES-SCH			-0.004	0.053	-0.057	0.070
Reading achievement					0.139*	0.018
School average achievement					-0.041	0.056
Student variance (σ_e^2)	0.945	0.025	0.928	0.025	0.928	0.025
School variance (σ_u^2)	0.056	0.011	0.054	0.012	0.054	0.012
Deviance	13909.954		13683.110		13682.494	

* $p < 0.05$

Note: Native-born students are the reference category in the model for variable measuring immigrant status. SES-I stands for standardised PISA index of socio-economic status and SES-SCH for school-average PISA index of socio-economic status.

Finally, multilevel modeling analysis indicated that country of origin of students, language spoken at home and teacher-student ratio at school do not seem to be associated with 15-year-old students' views on teacher-students relations in Greece.

Discussion

Overall, most findings of the present study regarding Greece are consistent with findings identified in the literature review for other countries and most of the variance in perceptions of student-teacher relation was attributed to student-level characteristics.

More specifically, in the present study 15-year-old male students in Greece were found to hold more negative views on their teacher-student relation than female, which is in line with previous international research (e.g., Fan, Williams & Corkin, 2011; Jerome, Hamre, & Pianta, 2009). The above-mentioned negative association remained even after controlling for reading achievement. In other words, boys in Greece with similar achievement in reading in PISA as girls seem to have worse opinion about teachers-students relations. This is an important finding that needs to be explored further in Greece, considering the indicated importance of positive teacher-student relations for student learning, motivation to learn, behavioral problems and school adjustment (Cornelius-White, 2007; Finn et al., 2009; Hattie, 2009).

Moreover, an interesting finding of the present study was that first-generation immigrant students seem to have more positive views towards teachers than native-born students and that second-generation students' views did not differ compared to their native-born counterparts. This finding is consistent with some previous research in other countries and should be further explored. As Cresswell (2004) indicated, first-generation immigrant students might hold a more positive view on the support and help they received from their teachers aiming at a more positive and engaged approach to their learning in order to overcome some of the disadvantages associated with settling into a new country. Nevertheless, as other researchers stated that minority students tended to report less favorable views on school climate (Battistich et al., 1997; Fan et al., 2011; Finn & Voelkl, 1993; Griffith, 2000; Johnson et al., 2001; Koth et al., 2008; Kuperminc et al., 2001; Mitchell et al., 2010), it is an important issue that merits further examination, as research has shown that positive

teacher-student relations can facilitate student learning and motivation (Cornelius-White, 2007; Finn et al., 2009; Hattie, 2009).

In addition, students attending private schools had more positive attitudes towards teachers, even after controlling for individual and school-average SES and reading achievement. These findings are also in line with previous research suggesting that private schools were more conducive to the development of a closer teacher-student relation than did public schools (Finn & Voelkl, 1993; Johnson, Crosnoe, & Elder, 2001). Moreover, reading achievement was found positively linked to students' views on teacher-student relation, consistent with previous studies worldwide (Eisenhower, Baker, & Blacher, 2007; Jerome et al., 2009; Košir, Sočan, & Pečjak, 2007).

However, contrary to previous international findings (Barile et al., 2012; Harvey, & Slatin, 1975), in the current study individual and school-average SES were not found to be related to students' views on teacher-students relations when included in the model, without other factors and therefore without issues of multicollinearity. Consequently, higher SES do not seem to be associated with more positive students' views on teacher-students relation in Greece, which is a promising finding. In addition, teacher-student ratio was not linked in the current study with students' perceptions of teacher-student relation, contrary to previous findings (Barile et al., 2012; Brekelmans et al., 2005; Johnson et al., 2001).

Overall, taking into account the findings of the current study, providing sufficient training to all teachers on how to improve relationship quality with students may be important for developing more positive teacher-student relations, which constitute an integral part of the overall school climate (Jerome et al., 2009). Through special-training programs, teachers should learn how not to bias their perceptions of the relationship with students because of gender, immigrant background or academic ability, and help children who enter school at a higher risk of poor relationships and poor academic outcomes (Jerome et al., 2009). Simultaneously, teachers should be trained to design activities that provide students and teachers with opportunities to discuss and share personal interests and experiences in order to strengthen teacher-student relation and boost greater understanding (Murray, 2002).

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