Predictors of School Violence Internationally: The Importance of Immigrant Status and Other Factors

Authors

David Rutkowski, Indiana University (Corresponding Author)

Leslie Rutkowski, Indiana University

Justin Wild, Indiana University

Biographical note

David Rutkowski is an assistant professor in the Department of Educational Leadership and Policy Studies at Indiana University, Bloomington. His research is focused in the area of immigrant students, evaluation, and international large-scale assessment. His interests include the work of international organizations, how immigrant students operate within schools systems and the production and use of educational evaluations around the world. Address: 201 N. Rose Ave, Bloomington, IN, 47401, USA; e-mail: drutkows@indiana.edu.

Leslie Rutkowski is an assistant professor of inquiry methodology in the Department of Counseling and Educational Psychology at Indiana University, Bloomington. Her research is focused in the area of international large-scale assessment from both methodological and applied perspectives. Her interests include the impact of background questionnaires on assessment results and examining methods for comparing heterogeneous populations in international surveys. Address: 201 N. Rose Ave, Bloomington, IN, 47401, USA; e-mail: lrutkows@indiana.edu.

Justin Wild is a graduate student pursuing a doctor of philosophy in Education Policy Studies at Indiana University, Bloomington with a concentration in Comparative and International Education. His research interests include cross-cultural issues, language of instruction, pedagogy, minority students, and evaluation in education. Address: 201 N. Rose Ave, Bloomington, IN, 47401, USA; e-mail: jcwild@indiana.edu.

Key Words

Immigrant Students, Violence, TIMSS, School Attachment

Abstract

Recent studies have documented differences in achievement between immigrant and native-born students (Peguero, 2009; Suárez-Orozco, Bang & Onaga, 2010). Further, research has identified differential impacts of school violence for immigrant students on achievement and that immigrant students experience more school violence than their native born peers (Rutkowski, Rutkowski & Engel, 2013); however, the literature is less clear regarding what other factors can explain differences in violent experiences. The current paper takes up this discussion and uses TIMSS 2011 data and a multilevel zero-inflated Poisson regression model to examine the relationship between immigrant status and school violence after controlling for a number of theoretically important factors. Findings point to the importance of school attachment, sex, and achievement as explanatory variables. And, ceteris paribus, the effect of immigration remains in a number of countries after controlling for school and student factors. We discuss our findings as they relate to international educational policy.

Introduction

From conversations about immigration policy in the U.S. to the effects of a rapidly changing European demographic, international policy discussions around the impacts of immigration abound. National narratives often focus on the impacts of high levels of immigration to the labor market, health care, and public safety. Also important to these discussions are issues around educating students with an immigration background and the ways in which populations of students are impacted by demographic changes. To that end, a body of research suggests that, in many countries, immigrant students tend to underperform on academic achievement assessments when compared to their native born peers (Garcia-Reid, Reid, & Peterson, 2005; Peguero, 2009; Rutkowski, Rutkowski, & Engel, 2013; Suárez-Orozco, Bang, & Onaga, 2010). The exact reasons why immigrant students perform lower than non-immigrant students is not well understood; however, research in this area provides some explanation for these differences. For example, a number of studies point to language (see Buka, Stichick, Birdthistle, & Earls, 2001; Kataoka et al., 2009; Liebkind & Jasinskaja-Lahti, 2000; Qin, Way, & Rana, 2008), cultural differences (see Suárez-Orozco, Pimentel, & Martin, 2009; Suárez-Orozco, Rhodes, & Milburn, 2009), or lower socio-economic status (see Akiba, 2008; Fuligni, 1997; Reardon & Galindo, 2009). Another important, yet less researched, explanation for poor immigrant performance concerns the issue of violence and victimization. For example, Rutkowski et al. (2013), have found that immigrant students tend to experience higher levels of violence than native-born students and, when compared to their non-immigrant peers, immigrant students also exhibit a larger negative effect of violence on educational achievement. In spite of this finding, there is little empirical evidence to support other correlates of violence for this international sample. As such, it is important to understand whether higher levels of violent

experiences among immigrant students and violent experiences in general within schools can be explained by other factors. Given that most educational systems are focused on equality and the success of all students (at least rhetorically), understanding correlates of low achievement and violence, particularly among vulnerable populations, is important. To that end, the current study seeks to examine whether an effect for immigrant status remains after accounting for other well-established predictors of violence in an international context.

Studies have repeatedly shown the negative effects of violence on the psychological and emotional well-being and overall health of young people (e.g. Bowen & Bowen, 1999; Cooley-Quille, Turner, & Beidel, 1995; Sampson, Raudenbush, & Earls, 1997). Exposure to violence is associated with "symptoms of anxiety, depression, and aggressive behaviors" (Osofsky, 1999, p. 37) and developmental problems (Gorman–Smith & Tolan, 1998) in children and adolescents. The psychological impacts of violence have also been shown to affect test-taking abilities in an otherwise healthy, young adult sample (Rutkowski, Gonzalez, Joncas, & von Davier, 2010). Relying on Rutkowski et al. (2013) and Akiba et al. (2002), we view school violence as an international phenomena that has negative consequences for most students. Similar to Rutkowski et al. (2013) we draw on a comprehensive definition of violence as including verbal, psychological, physical, and emotional aggression and abuse, and we understand violence to exist both on large and small scales in societies or communities (Davies, 2003; Olweus, 1994). School violence then can be seen as any behavior "intended to harm, physically or emotionally, persons in school and their property" (Benbenishty & Astor, 2005, p. 8) or more broadly "any conditions or acts that create a climate in which individual students and teachers feel fear or intimidation in addition to being the victims of assault, theft, or vandalism" (Batsche & Knoff, 1994, p. 165). These definitions align with the US Centers for Disease Control and Prevention's

(2011) definition of school violence, which is "the intentional use of physical force or power, against another person, group, or community, with the behavior likely to cause physical or psychological harm" (para. 2). Examples of such violence include bullying, fighting, use of weapons, electronic aggression, and gang violence. Of these examples, narrowly defining bullying proves difficult. For example, Swearer, Espelage, Vaillancourt, and Hymel (2010) comment that the "lack of consensus regarding how to define bullying continues" however, they state: "most agree that bullying describes intentionally harmful, aggressive behavior that is repetitive in nature and in which there is a power differential between the aggressor and victim" (p. 41). As such, we understand bullying as one sub-set of behaviors that falls under the broader concept of school violence.

Research question.

Given the deleterious effects of violence on achievement (see Akiba & Han, 2007; Akiba et al., 2002; Engel, Rutkowski, & Rutkowski, 2009; Ma, Phelps, Lerner, & Lerner, 2009), higher rates of exposure to school violence for immigrant students (see Eslea & Mukhtar, 2000; Fandrem, Ertesvåg, Strohmeier, & Roland, 2010; Graham & Juvonen, 2002; Peguero, 2009; Strohmeier & Spiel, 2003; Suárez-Orozco et al., 2010; Verkuyten & Thijs, 2002), and the differential impact of violence on achievement for immigrant populations (see Fandrem, Strohmeier, & Roland, 2009; Graham & Juvonen, 2002; Peguero, 2008; Rutkowski et al., 2013; Strohmeier & Spiel, 2003; Suárez-Orozco et al., 2010), we examine several factors associated with violent experiences in school internationally. Further, we test whether immigrant status of the student continues to account for differences in violent experiences internationally after controlling for these factors. In other words, based on existing research of violence in schools, using grade eight Trends in International Mathematics and Science Study (TIMSS) 2011 data

and a multilevel modeling approach, we explore the following research question: After controlling for a number of established predictors of violence, do immigrant students continue to report different levels of violence than their native born peers in an internationally representative sample? By controlling for important and possibly confounding variables, we are better able to estimate differences in violent experiences for immigrant students internationally.

Review of the Literature

In order to determine an appropriate model for our research interest, we examined existing literature for theoretically relevant predictors of student violent victimization in schools. Several key studies informed the process of our literature review. First, Motoko Akiba has produced multiple studies focused on predictors of school violence across several countries using TIMSS (Akiba et al., 2002; Akiba, 2008) and PISA (Akiba, 2010). Another study that guided our review was Rutkowski, Rutkowski, and Engel (2013), who also used multilevel models and TIMSS results to examine school violence and its particular effects on immigrant students and achievement. Next, a broader literature review of school violence, student victimization, and immigrants and schools was examined to determine additional predictors.

We recognize the construct of violence may be measured as *experience* of violence or *fear* of violence. While our study will use *experience* of violence, Akiba (2008) notes that *fear* of violence is a valid construct for studies linking violence and achievement: "Students' fear of being victimized by school violence affects their school attendance, learning motivation, and academic achievement" (p. 52). Therefore, when selecting the predictors for our model we reviewed literature that used either *experience* or *fear* of violence in the study.

Violence in schools.

Previous research has shown that student demographic factors, such as age, sex, and socioeconomic status (SES), are important predictors of school violence and victimization (see Akiba, 2008; Astor et al., 2002; Hong & Espelage, 2012). Specifically, a number of studies have shown that age contributes to the type of violence students experience at school (see Astor et al., 2002; Louw & Louw, 2007; Strawhacker, 2002; Sullivan, Cleary, & Sullivan, 2003), and that younger students act out their aggression more often than older students (see O'Keefe, 1997; Wilson, Bovet, Viswanathan, & Suris, 2012). Sex of the student has also been shown to predict violence victimization (see Astor et al., 2002; Eisenberg, Neumark-Sztainer, & Perry, 2009; Gottfredson, Gottfredson, Payne, & Gottfredson, 2005; Juvonen, Graham, & Schuster, 2003; Ma, 2001; Marachi, Astor, & Benbenishty, 2007; O'Keefe, 1997; Peguero, 2009; Verkuyten & Thijs, 2002; Vervoort, Scholte, & Overbeek, 2010) and the types of school violence students experienced. Further, studies have shown that boys tend to experience physical victimization while girls are more likely to experience verbal threats and social exclusion (see Hong & Espelage, 2012; Owens, Slee, & Shute, 2001; Smith et al., 1999).

Similar to Akiba (2008), we note an inconsistency in the literature regarding the effect of SES in school violence victimization. For example, Wilson et al. (2012) found that SES was not significant in a study of bullying in sub-Saharan Africa; however, this study only measured SES as a binary variable: economic deprivation – yes or no. Chen and Astor (2010) also found that family SES was non-significant in their study of school violence in Taiwan. Using a more nuanced composite measure, Akiba (2008) found that high SES was significant in 8 of 33 countries while low SES was predictive in one country (see also Due et al., 2009). Mouttapa et al. (2004) found that SES was significant only for female Latino and Asian students in Southern California. In the Midwest, Eisenberg et al. (2009) found SES non-significant overall; however,

it was a significant predictor of certain types of violence. In Israel, Khoury-Kassabri, Benbenishty, Astor, and Zeira (2004) found that SES significantly predicted all types of violence victimization considered in their study.

Beyond demographic considerations, academic achievement consistently correlates with violence in schools (see Akiba, 2008, 2010; Kochenderfer & Ladd, 1996; O'Moore & Kirkham, 2001; Peguero, 2009; Suárez-Orozco, Pimentel, et al., 2009). In particular, studies have shown that higher achievement is associated with lower reports of violence (Thijs & Verkuyten, 2008) and that violence victimization leads to mediating factors, such as absenteeism (Buhs, Ladd, & Herald, 2006) loneliness, depression, or low self-worth (Juvonen, Nishina, & Graham, 2000), which in turn lead to poor achievement. In contrast, Eisenberg et al. (2009) suggest that high and low achieving students report similar levels of victimization, while mid-achieving students report the least victimization (see also Hong & Espelage, 2012; Qin et al., 2008).

Predictors of school violence can also be found in research on student mental health (see Astor, Benbenishty, Vinokur, & Zeira, 2006; Jaycox et al., 2002; Juvonen et al., 2003; Warner, Weist, & Krulak, 1999; Williams & Veeh, 2012), where self-esteem is an important predictor (see Haynie et al., 2001; Juvonen et al., 2000; O'Moore & Kirkham, 2001). Specifically, Sharp (1996) found that while students reporting low self-esteem were as likely to be victims of school violence as their high self-esteemed peers, their response to violence encouraged further victimization (see also Smokowski & Kopasz, 2005). Studies of bullying in Europe (Olweus, 2006), Britain (Boulton & Smith, 2011), and Australia (Slee & Rigby, 1993) confirm this finding.

Research on parental involvement and school violence was a variable considered apart from Akiba's (2008, 2010) or Rutkowski et al.'s (2013) lines of research, with mixed findings.

Ma (2001) mentions that parental involvement in school is often thought to combat the presence of school violence, yet in his study of schools in Canada, parental involvement was not a significant predictor of school violence (see also Herrero, Estévez, & Musitu, 2006; Wilson et al., 2012). Reingle, Maldonado-Molina, Jennings, and Komro (2012), however, found that parental involvement protected against aggressive behavior of Hispanic youth in Chicago. Haynie et al. (2001) found a small negative effect for high levels of parental involvement on school violence. The author theorized that parental involvement may be associated with other variables thought to buffer against violence including social competence and peer choice. In contrast, high-level parental involvement was associated with greater levels of violence victimization (e.g. Nansel & Overpeck, 2001; Olweus, 2006). Similarly, Ladd and Ladd (1998) found that intrusive and controlling parental behavior led to greater incidence of violence in school (see also Batsche & Knoff, 1994; Veenstra et al., 2005), theorizing that overbearing parents limited victimized students' control over their own social lives, which led to increased violence.

In addition to student factors, schools and teachers may create environments that encourage or discourage school violence. Barnes, Brynard, and de Wet (2012) studied the relationship between school violence and school climate in South Africa, where school climate refers to students' and teachers' perceptions of "safety, teaching and learning, relations and the environment" (p. 210). Similar to Akiba (2010), better student support and school attachment were predictive of lower levels of violence. In a study of U.S. schools., Crosnoe, Johnson, and Elder (2004) found that student support protected against disciplinary problems; however, the relationship depended on gender and ethnicity. In contrast, Akiba's (2010) U.S. study found no significant relationship between student support and fear of violence.

Evidence shows that school attachment, or a strong sense of school community, is associated with less school violence (see Barnes et al., 2012; Bryk & Driscoll, 1998; Hong & Espelage, 2012; Jenkins, 1997; Stewart, 2003), especially after controlling for age, ethnicity, sex, and school SES (Battistich & Hom, 1997). Similar findings emerged in a U.S. study (Payne, Gottfredson, & Gottfredson, 2003). Akiba's (2010) also found that students reporting a strong sense of belonging reported less fear of school violence. Measuring school violence directly, Eisenberg et al. (2009) found that students reporting more harassment by peers also reported enjoying school less. Finally, Furlong and Chung (1995) found that multi-victim students consistently reported lower feelings of belonging in school.

Several studies found that weaker relationships between teachers and students lead to more school violence (Khoury-Kassabri, Benbenishty, & Astor, 2005; Khoury-Kassabri et al., 2004; Marachi et al., 2007). This finding was further supported by Akiba (2010), who found that reports of strong teacher-student relationships were associated with less fear of school violence. And Furlong and Chung (1995) found that students who were not victimized reported that they felt comfortable talking to a larger number of teachers than students who were victimized.

Regarding school administration, Gottfredson et al. (2005) found students reported less violence in schools in which rules were perceived to be fair and clear (see also Khoury-Kassabri et al., 2004). Ma (2001) also found that fair and clear discipline policies discouraged bullying in schools. Regarding minority populations, Ruck and Wortley (2002) found that the implementation of a school’s discipline policy was an important predictor of fear of violence. In particular, minority students who felt targeted by administration and teachers to receive disciplinary action reported higher levels of fear of violence.

Another important school-level predictor of school violence is school size, yet findings are mixed. For example, Barnes et al. (2012) identified smaller schools as more violent in a region of South Africa, while several other studies revealed higher levels of violence in larger schools in other settings (Gottfredson & Gottfredson, 1985; Ma, 2001; Stewart, 2003; Warner et al., 1999). In a more recent study in the U.S., Gottfredson et al. (2005) pointed to a possible interaction between school size and urbanicity. In particular, larger schools in urban areas were found to be no more violent at the middle school level and less violent at the high school level than their suburban and rural counterparts. The authors suggested that delinquent youth often drop out of school by the high school level in urban contexts, resulting in less reported school violence. Urbanicity was not predictive of student fear of violence in most of the 33 countries researched by Akiba (2008) or in her study of U.S. schools (Akiba, 2010).

Immigrant students.

Although predictors of school violence in immigrant populations are similar to those identified above, two additional predictors emerge as important: immigrant status and host country language proficiency. Examining immigrant status in The Netherlands, Verkuyten and Thijs (2002) found that ethnic minorities suffer more verbal abuse and exclusion in schools, while Eisenberg et al. (2009) found that ethnic minorities experience more of all types of peer harassment measured in their study (see also Espelage & Swearer, 2003; Hong & Espelage, 2012; Marachi et al., 2007; Mouttapa et al., 2004). The authors also found that sex of the student played a role in how immigrants experienced school violence, with boys being more likely than girls to experience victimization because of their race/ethnicity. Yet the role of immigrant status is more complicated. Peguero (2009) found that the generational status of immigrants (e.g. first- vs. second-generation) mattered when predicting school violence (see also Qin et al., 2008).

Similarly, Rutkowski et al. (2013) found that the effect of violence victimization on achievement differed across generational status depending on the contexts found within different countries.

A review of the literature provides inconsistent results regarding host country language proficiency and school violence. For example, evidence from certain studies indicates that increased use of the host-country language resulted in higher levels of either violence exposure (Kataoka et al., 2009) or discrimination (Liebkind & Jasinskaja-Lahti, 2000) among students or adolescent youth, respectively. Alternatively, Qin et al.'s (2008) study of Chinese students in the U.S. found that less proficiency in the native language led to greater discrimination and harassment.

The literature on school violence and how it pertains to immigrant students provided a number of theoretically important variables for the current study. We now discuss the data and the models used answer our research question regarding important predictors of school violence and whether immigrant status predicts differences in school violence.

Methods

Data.

TIMSS 2011 is the fifth in a continuing cycle of curriculum-based international assessments in mathematics and science that is administered every four years. The target population of TIMSS is all students at the end of fourth and eighth grades in participating educational systems. In addition to assessing mathematics and science achievement of fourth and eighth graders internationally, TIMSS also collects background data from students, teachers, and principals of participating schools. The target population of interest is formally defined as the grade that represents eight years of schooling, counting from the first year of primary education (Mullis, Martin, Ruddock, O'Sullivan, & Preuschoff, 2009). In 2011, 42 national educational

systems participated at eighth grade (Foy, Arora, & Stanco, 2013). For the current study we consider only 41 systems as Israel did not administer a school violence scale. Descriptive statistics of the student- and school-level variables can be found in Tables 1 and 2, respectively. Notable in Table 1 is the variation in counts of violence across countries – from an average of 1.23 in Armenia to 5.75 in Ghana. Further, there is meaningful variation in terms of the distribution of native and immigrant students. For example, 99 percent of Romanian students report being native born, while just 37 percent of student in Qatar report that they and their parents were born in Qatar.

TIMSS 2011 primarily used a two-stage stratified sample design. The first stage consisted of a sample of schools (in most educational systems about 150), which may have been stratified on variables of interest, such as geographic location. The second stage consisted of a sample of one or more classrooms from the target grade in sampled schools. All of the students in the sampled class(es) were selected to participate in the TIMSS testing (Joncas & Foy, 2012).

Measures.

We used TIMSS 2011 mathematics achievement scores along with student and principal background questionnaire responses for 41 educational systems. We discuss the selected variables at each level subsequently.

Student measures.

To answer our research question, we chose from the student questionnaire a set of items related to our definition of school violence. Five items comprise this scale and the scale stem asks “During this year, how often have any of the following things happened to you at school?” The individual items include (1) “I was made fun of or called names;” (2) “I was left out of games or activities by other students.” (3) “Someone spread lies about me; (4) “I was hit or hurt

by other students(s) (e.g. shoving, hitting, kicking);" (5) "I was made to do things I didn't want to do by other students;" Students responded to one of four options: *"at least once a week"*; *"once or twice a month"*; *"a few times a year";* and "*never."* These items were summed to create a scale from zero (all items were ticked "*never"*) to 15 (all items were ticked "*at least once a week."* The reliability of this scale in the TIMSS international sample, as measured by Guttman's λ_2 was acceptable ($\lambda_2 = .72$). We discuss the distribution of this scale in the *Analytic Methods* section.

As a proxy for socioeconomic status, we used the *home educational resources* scale provided in the TIMSS international database. This composite variable is a weighted likelihood estimate of an underlying latent variable that results from applying an item response theory model to three individual items. The variables that comprise this scale include student responses to questions about the number of books in the home, whether the student has an internet connection or their own room, and the highest education level of two parents. According to the technical documentation, this scale's reliability, as measured by Cronbach's α, ranged from .38 in Norway to .62 in Iran. We note this low reliability as a limitation. As a measure of perceived support, we used one item that asks students how much they agree with the following statement: "My teacher thinks I can do well in mathematics classes with difficult materials." Responses options were coded from 0 (*Disagree a lot*) to 3 (*Agree a lot*). As a measure of school attachment, we used the average of two variables that asked students how much they agree that (1) they like being in school; and (2) they feel like they belong at this school. This short scale had an estimated international reliability, α = .63. As a measure of the degree to which students have good relationships with their teachers, we used the first principal component score from the following items that ask students how much they agree that: (1) *"I know what my teacher expects*

me to do"; (2) *"My teacher is easy to understand"*; (3) *"I am interested in what my teacher says"*; and (4) *"My teacher gives me interesting things to do*." All items loaded highly ($F > 0.30$) on one component and the reliability of this scale in this sample, as measured by Cronbach's α was acceptable ($\alpha = .76$). As a measure of student perception of parental involvement we used the first principal component score from the following items that ask students how frequently (1) parents ask what the student is learning in school; (2) the student talks with his/her parents about schoolwork; (3) parents make sure the student sets aside time for homework; (4) parents check that homework is complete. All items loaded highly ($F > 0.30$) on one component and the reliability of this scale in this sample, as measured by Cronbach's α was acceptable ($\alpha = .76$). As a measure of achievement, we used the mathematics achievement scores provided in the international database. We also included measures of immigrant status of the student. In particular, if the student and both parents were born in the country of the test, we considered the student to be *native*. If the child was born in the country of the test but at least one parent was born abroad, we considered the student to be a *child of an immigrant*. If the child was born abroad, we considered that child to be *foreign born*. For students who were born abroad, we also included when the child immigrated to the country of the test. This variable was coded such that 0 = *did not immigrate*; 1 = *older than 10 years*; 2 = *5 to 10 years*; and 3 = *under 5 years*. To further understand the effect of having an immigration background, we included a single item that asked how often the student spoke the language of the test at home, where 0 = *never* to 3 = *always*. Finally, we included the student's sex such that 1=*male* and 0=*female*.

***School measures*.**

At the school level, we selected several variables related to the research question. As a measure of the discipline policy of the school, we used the first principal component scores for

the following five items: the frequency (1) that the school informs parents about school rules; (2) that the school discusses parent's concerns about the school organization including rules; how much time the principal has spent in the last year (3) that the principal spends time keeping an orderly atmosphere in the school; (4) ensuring that there are clear rules for student behavior; and (5) addressing disruptive student behavior. All items loaded highly ($F > 0.30$) on one component with the exception of item (1), which had a loading of .22. The reliability of this scale in the TIMSS sample, as measured by Cronbach's α was marginally acceptable ($\alpha = .60$). As a proxy for the student body's attachment to the school, we used the average of the following two items: (1) how the principal would characterize students' regard for school property; and (2) students' desire to do well in school. This short scale had an international reliability estimate of $\alpha = .72$ and was regarded as acceptable. We also used the principal's report of the total enrollment of students in the school as a measure of school size. To capture the urbanicity of the school, we included a variable that asked the principal about the population density of the immediate area in which the school was located. This item was coded such that 1 = *urban*; 2 = *suburban*; 3 = *medium size city or large town*; 4 = *small town*; 5 = *rural*. Urbanicity was not measured in Norway or Singapore and is not included in those models. As a second measure of parental involvement, we included the average of two variables: how the principal would characterize (1) parental support for student achievement; and (2) parental involvement in school activities. This two-item scale had an international reliability estimate of $\alpha = .69$ and was regarded as acceptable.

Analytic methods.

Given the inherent multilevel structure of the data (students nested in classes, classes nested in schools, schools nested in countries), a multilevel approach was clearly warranted.

Further, the nature of the school violence scale (frequency of occurrence) resulted in a non-normal distribution. Rather, the data more closely followed a Poisson distribution, which is sensible if we assume that the scale roughly represents *counts* of violent experience. Finally, the occurrence of violence in schools is, fortunately, a relatively rare occurrence, leading to more zeros than we would normally expect in a Poisson distribution. Figure 1 is a histogram of the violence scale with a normal density overlaid. Assuming a Poisson distribution with an overall empirical mean of 3.20 ($SD = 3.24$) and $n = 232,652$, we would normally expect that the number of zeros is $ne^{-\lambda} = 232,652e^{-3.2} = 9,483$ (Lambert, 1992). Instead, we observed 56,120 zeros. As such, our suspicion regarding too many zeros is confirmed and a typical multilevel Poisson model will not suffice. Instead, we chose a multilevel zero-inflated Poisson (M-ZIP) model for our analysis, given the distribution of the outcomes and the structure of the data. In a single-level ZIP model, it is assumed that there are two separate processes at work: a latent binomial regression that predicts whether someone is in the zero category (no occurrence) and a standard count or Poisson regression (frequency of occurrence; Lambert). A convenient feature of a ZIP model is that the variables that explain the zero part and count part of the model do not have to be the same. Given that our interest was in the count part of the model, we do not build a model for the zero part; however, we do estimate the coefficient associated with the odds of having no violent experiences. The model is a mixture of a Poisson distribution with parameter λ and a degenerate distribution with point mass at 0 and probability p. When excess zeros are present a ZIP model is a better fit to the data and is better predictive of both zeros and counts (Hall, 2000; Lambert, 1992).

Figure 1 about here

Although two-level M-ZIP models are theoretically well-established and relatively easy to implement in commercially available software, there is little practical capacity for higher-level M-ZIP models. As such, we chose to fit two-level M-ZIP models by country where students are nested in schools. This approach produces 41 separate models. Although this is clearly an inefficient use of the data, we argue that being able to more appropriately model the outcome distribution is a worthwhile trade-off. Further, any consistent patterns across countries in terms of predictors of violent experiences can provide evidence for further research once advances in software catch up with theory.

We fit all two-level M-ZIP models in M*plus* 7 (Muthén & Muthén, 1998) and we followed the recommendation of Rutkowski, Gonzalez, von Davier, and Joncas (2010) to apply sampling weights at the student and school level and to repeat each analysis five times, combining the estimates according to Rubin's (1987) rules. To account for the stratified sampling scheme in each country, we also used explicit stratification variables (Joncas & Foy, 2012), where applicable, via the *complex* method in M*plus*.

The models fit to the TIMSS 2011 data were specified as follows:

The logistic part: $\text{logit}(p_i) = \alpha_0$

The Poisson part: $\log(\lambda_{ij}) = \beta_{0j} + \sum_{h=1}^{13} \beta_{hj} x_{hij}$

$$\beta_{0j} = \gamma_{00} + \sum_{g=1}^{15} \gamma_{0g} Z_{gj} + U_{0j}$$

$$\beta_{hj} = \gamma_{h0} \text{ for all } h.$$

Then $\exp(\alpha_0)/(1+\exp(\alpha_0))$ expresses the probability of being in the zero category and the mean of the Poisson distribution is expressed as $\lambda = \exp(\gamma_{00} + \sum_{h=1}^{13} \gamma_{ho} x_{hij} + \sum_{g=1}^{15} \gamma_{0g} Z_{gj})$ with

between-country variance in β_{0j} expressed as $\text{var}(U_{0j}) = \tau_0^2$. The coefficients that express the relationship between the level-one predictors and the outcome are given as γ_{h0} and the level-two coefficients are given as γ_{0g}. The list of level-one and level-two predictor variables can be found in Appendix A. Given some evidence that immigrant students experience higher levels of violence (Rutkowski et al., 2013), we note four predictors of particular importance: *child of immigrant*, *foreign born*, *language spoken at home*, and *age of immigration*, which collectively provide information regarding the student's immigrant status. After controlling for other demographic variables, we examine whether immigrant status is associated with violent experiences at school in an international context. Further, we highlight international patterns in terms of important predictors of interest at both the student- and school-levels.

Coefficients are interpreted similar to those in standard multilevel regression: statistically significant positive coefficients imply a positive association with counts of violence and statistically significant negative coefficients imply a negative association with counts of violence. To put the Poisson regression coefficients in a more intuitive metric, we can exponentiate them (i.e., $e^{\gamma_{h0}x_{hij}}$) and directly interpret the multiplicative effect of a one unit change in the predictor on the outcome.

Results

Given the number of countries in the analysis and the large number of predictors, we highlight and discuss general patterns and other interesting findings. Full model results are available in Tables 3 to 7. In terms of the logistic or zero-part of the model, findings vary across countries: from a low of $\exp(-2.25)/(1+\exp(-2.25) = .10$ (95%CI[$.09, .13$]) in Thailand to .49 (95%CI[$.46, .51$]) in Armenia. The models suggest that from 10 to 49 percent of students across

countries fall into the zero class and report no violent experiences, with an average of 20 percent across the 41 countries.

With respect to the count or Poisson part of the model, we note the following findings at the student level. For 8 of 41 countries, perceived support was related to higher counts of violent experiences. Achievement was negatively associated with violent experiences in 25 of 41 countries, although the typical magnitude of the coefficient was quite small (-0.001 to -0.002). With the exception of Romania, Kazakhstan, and Tunisia where the effect was positive, age was not associated with school violence. In contrast, being a boy was strongly and positively associated with violent experiences in 33 of 41 countries. Notably, the effect was strongest in Palestine ($\exp(\hat{\gamma}_{40}) = \exp(.67) = 1.95$ (95%CI[$1.49, 2.66$]), which suggests that boys report nearly twice as many violent experiences than girls. In 11 countries, self-esteem was negatively associated with counts of violent experiences. In just four of 41 countries, the student-teacher relationship was negatively associated with counts of violence. These countries included Armenia, Bahrain, Iran, and Malaysia. In nine countries, there was a statistically significant relationship between parental involvement and violent experiences. Notably, however, the direction of these coefficients was mixed. In particular, the effect was positive in Hong Kong, Japan, Singapore, and Thailand. The effect was negative in Armenia, Macedonia, Russia, Sweden, and the Ukraine.

We found clear, consistent evidence of an effect for student attachment. Specifically, this effect was negative and statistically significant in 31 of 41 countries, suggesting that students who are attached to their schools report fewer violent experiences internationally. This effect is strongest in Lithuania ($\exp(-.34) = .71$; 95%CI[$.68, .75$]), providing some evidence that students who are more attached (by one unit on the scale) report just 71 percent as many counts

of school violence as their less-attached classmates. Less important internationally was the effect of SES, with only six countries reaching statistical significance. Further, the direction of the coefficients was mixed, with positive effects in Australia, Finland, Japan, New Zealand, and Sweden and a negative effect in Georgia.

In terms of immigrant status, the effect of being a child of an immigrant was statistically significant in Georgia, Hong Kong, Indonesia, Lebanon, Oman, and Singapore. In all six countries, the effect was positive, suggesting that students who are children of immigrants in these countries, on average, report higher numbers of violent experiences. Violent experiences for foreign born students were lower than native students in Armenia, Lithuania, and Macedonia. Whereas in Bahrain, Jordan, Lebanon, Qatar, Sweden, and Syria, foreign-born students report higher numbers of violent experiences. This effect was not statistically significant in all other countries, after controlling for other predictors of interest.

In eight of 41 countries, *age of immigration* was a statistically significant predictor of violent experiences. In particular, students who immigrate at younger ages into Armenia, Ghana, Hong Kong, Lithuania, and Macedonia, and UAE report fewer violent experiences while the opposite is true in Jordan and Sweden. Similarly, in eight countries, speaking the language of the test more often at home was also negatively associated with the outcome. In particular, the effect was negative in Bahrain, England, Hungary, Japan, Korea, New Zealand, and Romania, and USA. This effect is particularly strong in Korea ($\exp(-.195) = .82$; 95%CI[$.73, .93$]), which suggests that violent experiences are just 82 percent as high for a student who is one unit higher on the language frequency item (e.g., *always* vs. *almost always*). In contrast, the effect was weakly positive in Tunisia ($\exp(.065) = 1.07$; 95%CI[$1.02, 1.11$]), suggesting that average

counts of violent experiences are about 7 percent higher for students who are one unit higher on the *language frequency* item compared to their classmates.

We turn now to the results at the school-level (Table 5 and 6), where we found far fewer patterns in the data. In Jordan and the Ukraine, a small positive effect for school size was found, suggesting that larger schools are associated with higher average reports of violence while the opposite was found in Finland. Urbanicity was also associated with violence in seven countries. In particular, the smaller the community in which a school is located, the higher the number of reported violent experiences for all countries except Indonesia, where violence is lower in large communities. The discipline policy of the school was statistically significant in only two countries: Hong Kong, where the effect is negative, and Hungary, where the effect was positive. Student-body attachment to the school was not statistically significant in any country considered, while school perceptions of parental involvement resulted in mixed results for five countries. This variable was positively associated with higher average reports of violence in Ghana, Hungary, Japan, and Sweden, and negatively associated with violence in Georgia.

The remaining predictors are school-level aggregates of student-level predictors. In Russia, Sweden, and Turkey the school-level effect of parental support was positively associated with average reported violence. In other words, the higher the average level of parental support, as reported by the students, the higher the average of reported school violence. In six countries average achievement was associated with average reported violence. In particular, the effect was negative in Armenia, Chile, Lebanon, Qatar, and UAE and positive in Jordan. Average age of the eighth grade students was negatively associated with average counts of violence in Ghana and positively associated with average counts of violence in Korea. In Korea, this average effect was particularly strong ($\exp(.76) = 2.20$; 95%CI[$1.00, 4.55$]), suggesting that an eighth grade class

that is on average, one year older than a reference class would report more than twice the violent incidences. Average proportion of boys was associated with increased average counts of violence in 10 countries, including Australia, Finland, Georgia, Japan, Korea, New Zealand, Singapore, Thailand, Taiwan, and the U.S. Average self-esteem had mixed results in the few countries in which it was statistically significant. In particular, the effect was negative in Indonesia and Russia and positive in Lithuania and Turkey. The average frequency with which students spoke the language of the test at home was statistically significant in Syria, where the effect was positively associated with counts of violent experiences. And average SES of the school was statistically significantly associated with increased average violence in Hong Kong and Syria. The effect of average student-teacher relationships was statistically significant in seven countries. In particular, the effect was positive in Indonesia, UAE, and the U.S. and the effect was negative in Ghana, Slovenia, Turkey, and the Ukraine. Average student-reported parental involvement was positively associated with counts of violent experiences in Bahrain and Korea and negatively associated with violent experiences in Lebanon. Further, the average of student reports of school attachment was negatively associated with school violence in Finland, Indonesia, Japan, Malaysia, and Thailand.

Finally, we note in Table 7 that the between-school variance in the Poisson intercept is statistically significant in every country except Saudi Arabia. This suggests that average counts of violence differ across schools in all countries except Saudi Arabia.

Discussion

Recent international evidence has demonstrated that immigrant students who experience school violence tend to underperform on educational assessments even more than their native-born peers (Rutkowski et al., 2013). The same research also provided some evidence that

immigrant students experience more violence in schools than native-born students; however, reasons for increased exposure to school violence is less understood in this population. In the current paper, we picked up where Rutkowski et al. left off and developed a model of school violence that accounted for a number of student variables and school-level factors to explain differences in school violence. After controlling for theoretically relevant correlates of violence, our findings indicate that at least one immigrant student variable either (immigrant status, age of immigration, or language proficiency) was still predictive of violent experiences in most of the TIMSS-participating countries. For example, in nine countries to include the US, Korea, and Japan students who spoke the language of the test at home more often reported less school violence. In the US, this finding falls in line with Qin et al.'s (2008) study; however, in a number of countries there were low or no language effects. The absence of a language effect in some countries may be due to the immigrant population composition. For example, in Chile the largest immigrant population is from Peru and these students would likely speak the language of the test at home.

Similar to Peguero (2009) and Rutkowski, Rutkowski and Engel (2013), we found that either being foreign born or a child of an immigrant was a significant predictor school violence in a number of TIMSS countries. Specifically, where the effects were statistically significant, the effect was primarily a positive one. That is, an immigrant background usually associated with more frequent school violence. Surprisingly, only in Lebanon was there an effect for both foreign-born students and children of immigrants. These findings provides some evidence that increased levels of violence among immigrant students remain even after accounting for other theoretically important variables in a number of countries.

Another consistent and notable pattern is that higher school attachment was associated with less school violence in 31 of 41 countries, which is consistent with our review of the literature. Interpretive caution is warranted, however, since it is not clear whether students who experience less violence feel a greater sense of belonging, or whether school attachment acts as a protective factor against victimization. Some studies suggest that students who are frequently victimized feel a lower sense of belonging (see Akiba, 2010; Furlong & Chung, 1995), while other studies reported less violence at schools where students report higher school attachment (see Barnes et al., 2012; Battistich & Hom, 1997; Bryk & Driscoll, 1998; Jenkins, 1997), suggesting that decreases in school violence are associated with better school attachment. Nonetheless, the consistency of this finding suggests that school attachment is important and that further research in this area is justified.

Further, policies for fostering school attachment should approach the issue holistically, considering both the academic and social aspects of a student's sense of belonging (Akiba, 2010). Teachers would be integral to any policy (Akiba), as students spend most of their days in the presence of teachers and schools should support teachers, either through resources, training, or both, to create a welcoming and safe environment for students. Though school violence often happens outside the presence of adults, there is evidence that creating a welcoming environment where students feel that they belong can lead to less violence throughout the school (Payne et al., 2003).

In line with a number of other studies (see Hong & Espelage, 2012; Owens et al., 2001; Smith et al., 1999), we found strong evidence of sex differences in school violence. Consistent with Akiba (2008), we found that boys report more violence than girls in 33 of 41 countries. Countries with the greatest sex differences are Bahrain, Japan, Jordan, Palestine, Tunisia, and the

UAE. With the exception of Japan, these countries share a common dominant language and religion. Other countries in the Arabic region (Morocco, Palestine, Qatar, Saudi Arabia, and Syria) also demonstrate large sex differences, with boys reporting more school violence. Interestingly, all available[1] countries in this list rank below 100 of 135 countries included in the World Economic Forum's Global Gender Gap Index 2012 (Hausmann, Tyson, & Zahidi, 2012), suggesting that sex differences are pervasive in these societies. Given the linguistic and cultural regional similarities of this group of countries, it might prove useful to explore common policy interventions aimed at alleviating school violence among boys.

Along with Japan, another regional grouping emerged. Specifically, boys from the "Asian Tiger" countries (Taiwan, South Korea, Singapore, and Hong Kong) report more violence than girls. This finding falls in line with a regional analysis done by Lai, Ye, and Chang (2008), who also found higher rates of bullying among males in the same countries. To that end, interventions that alleviate violence among male students may further improve educational achievement of these already strong performing countries.

Our study found a negative effect for achievement in 24 of 41 countries. Although the effect sizes in our study were generally small, the findings are consistent with other studies (see Akiba, 2008, 2010; Buhs et al., 2006; Eisenberg et al., 2009; Suárez-Orozco, Pimentel, et al., 2009; Thijs & Verkuyten, 2008). But, the direction of this relationship is unclear. That is, whether low achieving students experience more violence or if students who experience more violence suffer academically is not known. Nonetheless, our findings suggest that low performing students are a population that experience violence more often than mid- and high-performing students. Given previous evidence that low achievers experience more school

[1] Palestine and Tunisia were not ranked.

violence, this could be an important policy focus. Additionally, the small effect size should be considered in conjunction with the scale of achievement. That is, although a one unit change in achievement predicts a small change in the number of violent experiences, large differences in achievement will predict more meaningful differences in reported violence. Finally, the consistency of this finding suggests that the relationship between school violence and achievement should be further studied. In particular, the causal nature of the relationship should be understood to better inform policy interventions.

Findings on the predictors of age, SES, self-esteem, parental involvement, teacher-student relationships, school size, and urbanicity were all consistent with the literature but significant in a minority of the countries measured in this research. Among these seven variables, self-esteem was significant in the greatest number of countries followed by parental involvement, SES and urbanicity, teacher-student relationships, age, and school size. Self-esteem appeared significant in most Arabic speaking countries that participated in our study including Jordan, Oman, Suadi Arabia, Syria, Tunisia, and the UAE. This suggests that there may be culturally specific factors associated with self-esteem in these countries and that policy makers in the region might work to better understand this phenomenon and explore policy interventions. Further, parental involvement was associated with more school violence in Hong Kong, Japan, Singapore, and Thailand while a negative effect existed in some European countries, including Armenia, Russia, Sweden, and Ukraine. This finding exemplifies that we should always use caution in interpreting international data and in suggesting uniform policy interventions across countries. For example, it may be that parent involvement in schools – proven to have many advantages in the US and Europe (Hill & Tyson, 2009; Karbach, Gottschling, Spengler, Hegewald, & Spinath, 2013), may be associated with increased victimization of students in some

Asian countries. Although our literature review pointed to SES, urbanicity, and teacher-student relationship as important correlates of school violence, our findings were consistent in just a few countries. Given a generally null finding for these variables, we do not discuss them further.

Two predictors in this study run contrary to the prevailing literature: student support and school discipline policies. Student support was a consistent predictor of *increased* school violence in 8 of 41 countries, whereas most studies found that support has a negative association. This finding again points to culture as important in contextualizing relationships in international studies. To that end, it could be that independent learning is valued in these countries and that students who receive extra learning attention from teachers are singled out for victimization. In only two countries school discipline policy was a significant predictor, with mixed findings. In Hong Kong, clearer rules and more consistent discipline enforcement were associated with less violence, while these same school characteristics predicted greater incidence of school violence in Hungary. Although reasons for this mixed finding are unclear, one possibility is the comparative ethnic homogeneity of Hong Kong, which might provide students with a sense of fairness with respect to discipline policies (Ruck & Wortley, 2002).

We note several limitations to our study. First, our violence measure includes both physical and verbal victimization and social exclusion. Further, our study does not differentiate among *types* of reported violence nor does it identify the perpetrator; however, this distinction could result in different findings. For example, if girls often experience verbal harassment from boys, then policy makers might focus on sensitizing boys and girls on sex similarities and differences. The TIMSS data is cross-sectional and observational making any conclusions correlational only. To that end, further research in each of the identified areas is important for establishing the causal direction of the relationships. Finally, we note that given the state-of-the-

art in commercially available software, we made a trade-off between fully capturing the nested structure of the data (students in classes in schools in countries) and most appropriately modeling the distribution of school violence. Despite these limitations, we found evidence of several strong, consistent predictors of school violence internationally. Each of these variables (sex, school attachment, and achievement) are areas in need of further research and are also possible candidates for policy intervention aimed at reducing violence in schools.

Summary and Conclusion

The current study used the most recently available TIMSS results along with a cutting-edge method (multilevel zero-inflated Poisson regression) to better understand correlates of violence internationally. In particular, after controlling for theoretically relevant predictors of violence, we examined whether statistically significant differences remained between immigrant and native-born students in their reports of school violence. In addition to a fairly consistent picture of the association between immigrant status and violence, we also identified several other predictors of violence internationally. Further, our research highlighted the importance of considering the national and cultural context of findings when attempting to study school violence in an international context.

Our results point to a need by policy makers internationally to work toward fostering a sense of belonging in school along with creating an atmosphere of equality for all students, but especially for immigrants. A clear case in point is the recent bombing in Boston, where the conversation immediately zeroed in on the suspects' Chechan and immigrant background and the fact that both men were U.S. educated. Conjecture swirls around whether the educational system could have played a factor in preventing these events from occurring, given the relatively young age at which they entered the U.S. And as educational researchers, we are obligated to consider

the importance of supporting and integrating new, especially young, residents, who face numerous challenges in an unfamiliar educational landscape. The international perspective provided by this study provides both researchers and policy makers with further evidence of the importance of providing immigrant populations of students with the resources they need to succeed.

References

Akiba, M. (2008). Predictors of student fear of school violence: A comparative study of eighth graders in 33 countries. *School Effectiveness and School Improvement*, *19*(1), 51–72. doi:10.1080/09243450801936878

Akiba, M. (2010). What predicts fear of school violence among U.S. adolescents? *Teachers College Record*, *112*(1), 68–102.

Akiba, M., & Han, S. (2007). Academic differentiation, school achievement and school violence in the USA and South Korea. *Compare: A Journal of Comparative and International Education*, *37*(2), 201–219. doi:10.1080/03057920601165561

Akiba, M., LeTendre, G. K., Baker, D. P., & Goesling, B. (2002). Student victimization: National and school system effects on school violence in 37 nations. *American Educational Research Journal*, *39*(4), 829–853. doi:10.3102/00028312039004829

Astor, R. A., Benbenishty, R., Marachi, R., Haj-Yahia, M. M., Zeira, A., Perkins-Hart, S., & Pitner, R. O. (2002). The awareness of risky peer group behaviors on school grounds as predictors of students' victimization on school grounds: Part I-elementary schools. *Journal of School Violence*, *1*, 11–33.

Astor, R. A., Benbenishty, R., Vinokur, A. D., & Zeira, A. (2006). Arab and Jewish elementary school students' perceptions of fear and school violence: Understanding the influence of school context. *British Journal of Educational Psychology*, *76*, 91–118.

Barnes, K., Brynard, S., & de Wet, C. (2012). The school in school violence in the Eastern Cape Province of South Africa. *Journal of Social Science*, *31*, 209–218.

Batsche, G. M., & Knoff, H. M. (1994). Bullies and their victims: Understanding a pervasive problem in the schools. *School Psychology Review*, *23*(2), 165.

Battistich, V., & Hom, A. (1997). The relationship between students' sense of their school as a community and their involvement in problem behaviors. *American Journal of Public Health*, *87*(12), 1997–2001.

Benbenishty, R., & Astor, R. A. (2005). *School violence in context: Culture, neighborhood, family, school, and gender* (Vol. xxiv). New York, NY, US: Oxford University Press.

Boulton, M. J., & Smith, P. K. (2011). Bully/victim problems in middle-school children: Stability, self-perceived competence, peer perceptions and peer acceptance. *British Journal of Developmental Psychology*, *12*, 315–329.

Bowen, N. K., & Bowen, G. L. (1999). Effects of crime and violence in neighborhoods and schools on the school behavior and performance of adolescents. *Journal of Adolescent Research*, *14*(3), 319–342. doi:10.1177/0743558499143003

Bryk, A. S., & Driscoll, M. E. (1998). *The high school as community: Contextual influences and consequences for students and teachers*. Madison, WI: National Center on Effective Secondary Schools.

Buhs, E. S., Ladd, G. W., & Herald, S. L. (2006). Peer exclusion and victimization: Processes that mediate the relation between peer group rejection and children's classroom engagement and achievement? *Journal of Educational Psychology*, *98*, 1–13.

Buka, S. L., Stichick, T. L., Birdthistle, I., & Earls, F. J. (2001). Youth exposure to violence: Prevalence, risks, and consequences. *American Journal of Orthopsychiatry*, *71*, 298–310.

Centers for Disease Control and Prevention. (2011). Injury Prevention & Control. *About School Violence*. Retrieved from http://www.cdc.gov/violenceprevention/youthviolence/schoolviolence/

Chen, J.-K., & Astor, R. A. (2010). School violence in Taiwan: Examining how Western risk factors predict school violence in an Asian culture. *Journal of Interpersonal Violence, 25*, 1388–1410.

Cooley-Quille, M. R., Turner, S. M., & Beidel, D. C. (1995). Emotional impact of children's exposure to community violence: A preliminary study. *Journal of the American Academy of Child & Adolescent Psychiatry, 34*(10), 1362–1368. doi:10.1097/00004583-199510000-00022

Crosnoe, R., Johnson, M. K., & Elder, G. H. (2004). Intergenerational bonding in school: The behavioral and contextual correlates of student-teacher relationships. *Sociology of Education*, *77*(1), 60–81. doi:10.2307/3649403

Davies, L. (2003). *Education and conflict: Complexity and chaos*. New York: Psychology Press.

Due, P., Merlo, J., Harel-Fisch, Y., Damsgaard, M. T., Holstein, B. E., Hetland, J., Currie, C., Gabhainn, S. N., de Matos, M. G., & Lynch, J. (2009). Socioeconomic inequality in exposure to bullying during adolescence: A comparative, cross-sectional, multilevel study in 35 countries. *American Journal of Public Health*, *99*(5), 907–914. doi:10.2105/AJPH.2008.139303

Eisenberg, M. E., Neumark-Sztainer, D., & Perry, C. L. (2009). Peer harassment, school connectedness, and academic achievement. *Journal of School Health, 73*, 311–316.

Engel, L. C., Rutkowski, D., & Rutkowski, L. (2009). The harsher side of globalisation: Violent conflict and academic achievement. *Globalisation, Societies and Education*, *7*(4), 433–456. doi:10.1080/14767720903412242

Eslea, M., & Mukhtar, K. (2000). Bullying and racism among Asian schoolchildren in Britain. *Educational Research*, *42*(2), 207–217. doi:10.1080/001318800363845

Espelage, D. L., & Swearer, S. M. (2003). Research on school bullying and victimization: What have we learned and where do we go from here? *School Psychology Review*, *32*, 365–383.

Fandrem, H., Ertesvåg, S. K., Strohmeier, D., & Roland, E. (2010). Bullying and affiliation: A study of peer groups in native and immigrant adolescents in Norway. *European Journal of Developmental Psychology*, *7*(4), 401–418. doi:10.1080/17405620802335075

Fandrem, H., Strohmeier, D., & Roland, E. (2009). Bullying and victimization among native and immigrant adolescents in Norway: The role of proactive and reactive aggressiveness. *The Journal of Early Adolescence*, *29*(6), 898–923. doi:10.1177/0272431609332935

Foy, P., Arora, A., & Stanco, G. (Eds.). (2013). *TIMSS 2011 user guide for the international database*. Boston: TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College and International Association for the Evaluation of Educational Achievement (IEA).

Fuligni, A. J. (1997). The academic achievement of adolescents from immigrant families: The role of family background, attitudes, and behavior. *Child Development, 68*(2), 351–363.

Furlong, M. J., & Chung, A. (1995). Who are the victims of school violence? A comparison of student non-victims and multi-victims. *Education & Treatment of Children (ETC), 18*(3), 282–298.

Garcia-Reid, P., Reid, R. J., & Peterson, N. A. (2005). School engagement among Latino youth in an urban middle school context valuing the role of social support. *Education and Urban Society*, *37*, 257–275.

Gorman–Smith, D., & Tolan, P. (1998). The role of exposure to community violence and developmental problems among inner-city youth. *Development and Psychopathology, 10*(01), 101–116.

Gottfredson, G. D., & Gottfredson, D. C. (1985). *Victimization in schools*. New York: Plenum Press.

Gottfredson, G. D., Gottfredson, D. C., Payne, A. A., & Gottfredson, N. C. (2005). School climate predictors of school disorder: Results from a national study of delinquency prevention in schools. *Journal of Research in Crime and Delinquency, 42*, 412–444.

Graham, S., & Juvonen, J. (2002). Ethnicity, peer harassment, and adjustment in middle school: An exploratory study. *The Journal of Early Adolescence*, *22*(2), 173–199. doi:10.1177/0272431602022002003

Hall, D. B. (2000). Zero-inflated Poisson and binomial regression with random effects: A case study. *Biometrics, 56*(4), 1030–1039. doi:10.2307/2677034

Hausmann, R., Tyson, L., & Zahidi, S. (2012). *The global gender gap report 2012*. Geneva: World Economic Forum.

Haynie, D. L., Nansel, T., Eitel, P., Crump, A. D., Saylor, K., Yu, K., & Simons-Morton, B. (2001). Bullies, victims, and bully/victims: Distinct groups of at-risk youth. *The Journal of Early Adolescence*, *21*, 29–49.

Herrero, J., Estévez, E., & Musitu, G. (2006). The relationships of adolescent school-related deviant behaviour and victimization with psychological distress: Testing a general model of the mediational role of parents and teachers across groups of gender and age. *Journal of Adolescence, 29*, 671–690.

Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: A meta-analytic assessment of the strategies that promote achievement. *Developmental Psychology*, *45*(3), 740.

Hong, J. S., & Espelage, D. L. (2012). A review of research on bullying and peer victimization in school: An ecological systems analysis. *Aggression and Violent Behavior, 17*, 311–322.

Jaycox, L. H., Stein, B. D., Kataoka, S. H., Wong, M., Fink, A., Escudero, P., & Zaragoza, C. (2002). Violence exposure, posttraumatic stress disorder, and depressive symptoms among recent immigrant schoolchildren. *Journal of the American Academy of Child & Adolescent Psychiatry*, *41*, 1104–1110.

Jenkins, P. H. (1997). School delinquency and the school social bond. *Journal of Research in Crime and Delinquency, 34*(3), 337–367.

Joncas, M., & Foy, P. (2012). Sample design in TIMSS and PIRLS. In M. O. Martin & I. V. S. Mullis (Eds.), *Methods and procedures in TIMSS and PIRLS 2011*. Boston: TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College.

Juvonen, J., Graham, S., & Schuster, M. A. (2003). Bullying among young adolescents: The strong, the weak, and the troubled. *Pediatrics, 112*, 1231–1237.

Juvonen, J., Nishina, A., & Graham, S. (2000). Peer harassment, psychological adjustment, and school functioning in early adolescence. *Journal of Educational Psychology, 92*, 349.

Karbach, J., Gottschling, J., Spengler, M., Hegewald, K., & Spinath, F. M. (2013). Parental involvement and general cognitive ability as predictors of domain-specific academic achievement in early adolescence. *Learning and Instruction, 23*, 43–51.

Kataoka, S., Langley, A., Stein, B., Jaycox, L., Zhang, L., Sanchez, N., & Wong, M. (2009). Violence exposure and PTSD: The role of English language fluency in Latino youth. *Journal of Child and Family Studies, 18*, 334–341.

Khoury-Kassabri, M., Benbenishty, R., & Astor, R. A. (2005). The effects of school climate, socioeconomics, and cultural factors on student victimization in Israel. *Social Work Research*, *29*, 165–180.

Khoury-Kassabri, M., Benbenishty, R., Astor, R. A., & Zeira, A. (2004). The contributions of community, family, and school variables to student victimization. *American Journal of Community Psychology*, *34*, 187–204.

Kochenderfer, B. J., & Ladd, G. W. (1996). Peer victimization: Cause or consequence of school maladjustment? *Child Development*, *67*, 1305–1317.

Ladd, G. W., & Ladd, B. K. (1998). Parenting behaviors and parent–child relationships: Correlates of peer victimization in kindergarten? *Developmental Psychology, 34*(6), 1450–1458. doi:10.1037/0012-1649.34.6.1450

Lai, S. L., Ye, R., & Chang, K. P. (2008). Bullying in middle schools: An Asian-Pacific regional study, *9*(4), 503–515. doi:10.1007/BF03025666

Lambert, D. (1992). Zero-Inflated Poisson Regression, with an application to defects in manufacturing. *Technometrics*, *34*(1), 1–14. doi:10.2307/1269547

Liebkind, K., & Jasinskaja-Lahti, I. (2000). Acculturation and psychological well-being among immigrant adolescents in Finland: A comparative study of adolescents from different cultural backgrounds. *Journal of Adolescent Research*, *15*, 446–469.

Louw, D., & Louw, A. (2007). *Child and adolescent development*. Bloemfontein: ABC Printers.

Ma, L., Phelps, E., Lerner, J. V., & Lerner, R. M. (2009). Academic competence for adolescents who bully and who are bullied findings from the 4-H study of positive youth development. *The Journal of Early Adolescence, 29*(6), 862–897. doi:10.1177/0272431609332667

Ma, X. (2001). Bullying and being bullied: To what extent are bullies also victims? *American Educational Research Journal*, *38*(2), 351–370. doi:10.2307/3202462

Marachi, R., Astor, R. A., & Benbenishty, R. (2007). Effects of student participation and teacher support on victimization in Israeli schools: An examination of gender, culture, and school type. *Journal of Youth and Adolescence*, *36*, 225–240.

Mouttapa, M., Valente, T., Gallaher, P., Rohrbach, L. A., & Unger, J. B. (2004). Social network predictors of bullying and victimization. *Adolescence*, *39*, 315–335.

Mullis, I. V. S., Martin, M. O., Ruddock, G. J., O'Sullivan, C. Y., & Preuschoff, C. (2009). *TIMSS 2011 assessment frameworks*. Amsterdam: International Association for the Evaluation of Educational Achievement.

Muthén, L., & Muthén, B. O. (1998). *Mplus user's guide.* (Sixth edition.). Los Angeles, CA: Muthén & Muthén.

Nansel, T., & Overpeck, M. (2001). Bullying behaviors among us youth: Prevalence and association with psychosocial adjustment. *JAMA, 285*(16), 2094–2100. doi:10.1001/jama.285.16.2094

O'Keefe, M. (1997). Adolescents' exposure to community and school violence: Prevalence and behavioral correlates. *Journal of Adolescent Health*, *20*, 368–376.

O'Moore, M., & Kirkham, C. (2001). Self-esteem and its relationship to bullying behaviour. *Aggressive Behavior, 27*(4), 269–283.

Olweus, D. (1994). Bullying at school: Basic facts and effects of a school based intervention program. *Journal of Child Psychology and Psychiatry*, *35*(7), 1171–1190. doi:10.1111/j.1469-7610.1994.tb01229.x

Olweus, D. (2006). Bullying at school: Knowledge base and an effective intervention programa. *Annals of the New York Academy of Sciences*, *794*, 265–276.

Osofsky, J. D. (1999). The impact of violence on children. *The Future of Children*, *9*(3), 33–49. doi:10.2307/1602780

Owens, L., Slee, P., & Shute, R. (2001). Victimization among teenage girls: What can be done about indirect harassment? In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 215–241). New York: The guilford Press.

Payne, A. A., Gottfredson, D. C., & Gottfredson, G. D. (2003). Schools as communities: The relationships among communal school organization, student bonding, and school disorder. *Criminology*, *41*(3), 749–778. doi:10.1111/j.1745-9125.2003.tb01003.x

Peguero, A. A. (2008). Is immigrant status relevant in school violence research? An analysis with Latino students. *The Journal of school health*, *78*(7), 397–404. doi:10.1111/j.1746-1561.2008.00320.x

Peguero, A. A. (2009). Victimizing the children of immigrants Latino and Asian American student victimization. *Youth & Society*, *41*, 186–208.

Qin, D. B., Way, N., & Rana, M. (2008). The "model minority" and their discontent: Examining peer discrimination and harassment of Chinese American immigrant youth. *New Directions for Child and Adolescent Development*, *121*, 27–42.

Reardon, S. F., & Galindo, C. (2009). The Hispanic-White achievement gap in math and reading in the elementary grades. *American Educational Research Journal*, *46*(3), 853–891. doi:10.3102/0002831209333184

Reingle, J. M., Maldonado-Molina, M. M., Jennings, W. G., & Komro, K. A. (2012). Racial/ethnic differences in trajectories of aggression in a longitudinal sample of high-risk, urban youth. *Journal of Adolescent Health*, *51*, 45–52.

Rubin, D. B. (1987). *Multiple imputation for nonresponse in surveys*. New York: Wiley.

Ruck, M. D., & Wortley, S. (2002). Racial and ethnic minority high school students' perceptions of school disciplinary practices: A look at some Canadian findings. *Journal of Youth and Adolescence*, *31*, 185–195.

Rutkowski, L., Gonzalez, E., Joncas, M., & von Davier, M. (2010). International large-scale assessment data: Issues in secondary analysis and reporting. *Educational Researcher*, *39*(2), 142–151.

Rutkowski, L., Rutkowski, & Engel, L. (2013). Sharp contrasts at the boundaries: School violence and educational outcomes internationally. *Comparative Education Review*, *57*(2), 232–259. doi:10.1086/669120

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, *277*(5328), 918–924. doi:10.1126/science.277.5328.918

Sharp, S. (1996). Self-esteem, response style and victimization possible ways of preventing victimization through parenting and school based training programmes. *School Psychology International*, *17*, 347–357.

Slee, P. T., & Rigby, K. (1993). The relationship of Eysenck's personality factors and self-esteem to bully-victim behaviour in Australian schoolboys. *Personality and Individual Differences*, *14*, 371–373.

Smith, P. K., Morita, Y. E., Junger-Tas, J. E., Olweus, D. E., Catalano, R. F., & Slee, P. E. (1999). *The nature of school bullying: A cross-national perspective*. New York: Taylor & Frances.

Smokowski, P. R., & Kopasz, K. H. (2005). Bullying in school: An overview of types, effects, family characteristics, and intervention strategies. *Children & Schools, 27*, 101–110.

Stewart, E. A. (2003). School social bonds, school climate, and school misbehavior: A multilevel analysis. *Justice Quarterly*, *20*, 575–604.

Strawhacker, M. A. T. (2002). School violence: An overview. *The Journal of School Nursing*, *18*, 68–72.

Strohmeier, D., & Spiel, C. (2003). Immigrant children in Austria. *Journal of Applied School Psychology*, *19*(2), 99–116. doi:10.1300/J008v19n02_07

Suárez-Orozco, C., Bang, H. J., & Onaga, M. (2010). Contributions to variations in academic trajectories amongst recent immigrant youth. *International Journal of Behavioral Development*, *34*, 500–510.

Suárez-Orozco, C., Pimentel, A., & Martin, M. (2009). The significance of relationships: Academic engagement and achievement among newcomer immigrant youth. *The Teachers College Record*, *111*(3), 712–749.

Suárez-Orozco, C., Rhodes, J., & Milburn, M. (2009). Unraveling the immigrant paradox. *Youth & Society*, *41*(2), 151–185. doi:10.1177/0044118X09333647

Sullivan, K., Cleary, M. M., & Sullivan, G. (2003). *Bullying in secondary schools: What it looks like and how to manage it*. London: Sage Publications Limited.

Swearer, S. M., Espelage, D. L., Vaillancourt, T., & Hymel, S. (2010). What can be done about school bullying? Linking research to educational practice. *Educational Researcher*, *39*(1), 38–47. doi:10.3102/0013189X09357622

Thijs, J., & Verkuyten, M. (2008). Peer victimization and academic achievement in a multiethnic sample: The role of perceived academic self-efficacy. *Journal of Educational Psychology*, *100*, 754–764.

Veenstra, R., Lindenberg, S., Oldehinkel, A. J., De Winter, A. F., Verhulst, F. C., & Ormel, J. (2005). Bullying and victimization in elementary schools: A comparison of bullies, victims, bully/victims, and uninvolved preadolescents. *Developmental Psychology*, *41*(4), 672–682. doi:10.1037/0012-1649.41.4.672

Verkuyten, M., & Thijs, J. (2002). Racist victimization among children in the Netherlands: The effect of ethnic group and school. *Ethnic and Racial Studies*, *25*, 310–331.

Vervoort, M. H. M., Scholte, R. H. J., & Overbeek, G. (2010). Bullying and victimization among adolescents: The role of ethnicity and ethnic composition of school class. *Journal of Youth and Adolescence*, *39*, 1–11.

Warner, B. S., Weist, M. D., & Krulak, A. (1999). Risk factors for school violence. *Urban Education*, *34*, 52–68.

Williams, J. H., & Veeh, C. A. (2012). Continued knowledge development for understanding bullying and school victimization. *Journal of Adolescent Health*, *51*, 3–5.

Wilson, M. L., Bovet, P., Viswanathan, B., & Suris, J.-C. (2012). Bullying among adolescents in a sub-Saharan middle-income setting. *Journal of Adolescent Health*, *51*, 96–98.

Table 1
Student-Level Descriptive Statistics

Country	N	Violence (SD)	Student Support (SD)	Achiev. (SD)	Age (SD)	Male (SD)	Self-Esteem (SD)	Lang. Freq (SD)	SES (SD)	Student-Teacher Relations (SD)	Parent Involve. (SD)	Attach. (SD)	Native (SD)	Child of Immig. (SD)	Foreign Born (SD)	Age of Immig (SD)
Armenia	5846	1.23 (5.46)	1.76 (2.55)	466.59 (90.68)	4.27 (1.43)	0.51 (1.24)	0.71 (1.71)	2.70 (1.46)	10.77 (4.24)	0.92 (2.97)	0.68 (2.73)	2.37 (1.73)	0.89 (0.78)	0.07 (0.62)	0.05 (0.52)	1.87 (0.84)
Australia	7556	3.24 (18.97)	1.83 (5.07)	504.80 (85.42)	4.40 (3.13)	0.50 (2.90)	0.81 (4.13)	2.72 (3.65)	11.15 (9.13)	-0.41 (9.00)	-0.10 (8.30)	2.05 (4.38)	0.57 (2.87)	0.30 (2.66)	0.13 (1.94)	2.07 (0.91)
Bahrain	4640	3.37 (5.91)	2.07 (1.59)	409.22 (99.57)	4.85 (1.16)	0.50 (0.83)	0.77 (1.16)	2.33 (1.55)	10.10 (2.69)	0.25 (2.50)	0.30 (2.59)	2.25 (1.30)	0.65 (0.78)	0.15 (0.58)	0.20 (0.66)	2.37 (0.86)
Chile	5835	2.86 (18.13)	1.56 (6.25)	416.27 (79.65)	4.16 (4.80)	0.47 (3.28)	0.58 (4.48)	2.79 (3.39)	9.71 (10.77)	0.09 (9.63)	0.28 (8.98)	2.37 (4.43)	0.96 (1.34)	0.02 (0.88)	0.03 (1.03)	2.18 (0.94)
England	3842	2.59 (36.42)	1.86 (9.99)	506.76 (85.25)	4.66 (6.11)	0.52 (6.29)	0.84 (8.42)	2.78 (6.96)	10.78 (20.44)	-0.31 (19.19)	0.09 (17.83)	2.01 (9.29)	0.73 (5.58)	0.18 (4.80)	0.09 (3.65)	2.58 (0.73)
Finland	4266	2.41 (9.78)	1.47 (3.17)	514.03 (64.85)	3.96 (0.93)	0.52 (1.84)	0.69 (2.64)	2.85 (1.69)	11.22 (5.40)	-0.94 (5.19)	-1.01 (5.30)	2.12 (2.53)	0.91 (1.07)	0.06 (0.87)	0.03 (0.67)	2.19 (0.85)
Georgia	4563	1.70 (7.54)	1.87 (3.22)	431.14 (105.91)	4.72 (1.69)	0.53 (1.56)	0.75 (2.19)	2.80 (1.61)	10.53 (5.57)	0.71 (4.09)	0.66 (3.59)	2.50 (2.06)	0.92 (0.86)	0.05 (0.65)	0.04 (0.59)	2.31 (0.87)
Ghana	7323	5.75 (27.96)	2.13 (6.91)	330.83 (85.55)	3.31 (12.67)	0.53 (3.67)	0.89 (4.74)	1.39 (5.92)	7.87 (13.82)	0.94 (8.13)	0.28 (11.50)	2.64 (4.23)	0.88 (2.37)	0.05 (1.61)	0.07 (1.84)	2.24 (0.94)
Hong Kong	4015	3.63 (12.76)	1.32 (3.54)	585.57 (84.47)	4.67 (2.95)	0.51 (2.09)	0.52 (2.64)	2.47 (3.72)	9.91 (7.02)	-0.70 (6.64)	-1.46 (6.47)	1.96 (3.27)	0.42 (2.07)	0.33 (1.97)	0.25 (1.81)	1.83 (0.93)
Hungary	5178	3.08 (11.79)	1.31 (3.88)	504.81 (89.59)	4.06 (2.81)	0.51 (2.07)	0.67 (3.03)	2.89 (1.56)	10.77 (7.19)	-0.38 (6.34)	0.31 (5.24)	1.97 (3.38)	0.93 (1.07)	0.05 (0.86)	0.03 (0.67)	2.18 (0.88)
Indonesia	5795	4.11 (92.31)	1.60 (18.05)	385.84 (83.93)	4.52 (21.25)	0.50 (12.65)	0.58 (13.86)	1.54 (23.79)	8.35 (38.25)	0.00 (23.62)	0.09 (36.00)	2.47 (12.00)	0.89 (8.05)	0.00 (1.26)	0.11 (7.97)	2.25 (0.93)
Iran	6029	3.33 (42.50)	1.99 (12.48)	414.96 (94.70)	4.56 (9.27)	0.54 (6.54)	0.83 (9.32)	2.01 (15.06)	8.61 (29.91)	0.38 (18.12)	-0.17 (17.36)	2.44 (9.18)	0.94 (3.01)	0.02 (1.84)	0.04 (2.43)	1.96 (0.93)
Italy	3979	2.06 (29.06)	1.76 (9.43)	498.38 (73.17)	4.96 (6.17)	0.51 (5.95)	0.69 (8.09)	2.57 (8.64)	10.30 (19.63)	-0.41 (14.91)	0.46 (15.43)	2.00 (7.40)	0.85 (4.24)	0.08 (3.23)	0.07 (3.02)	2.07 (1.02)

Japan	4414	3.06 (52.07)	0.80 (11.34)	569.83 (84.68)	4.24 (7.01)	0.50 (8.18)	0.29 (8.24)	2.94 (5.01)	10.75 (25.64)	-1.75 (23.50)	-1.48 (24.80)	2.09 (11.27)	0.97 (2.57)	0.02 (2.13)	0.01 (1.46)	2.13 (0.83)
Jordan	7694	3.61 (14.16)	2.25 (3.42)	405.88 (99.23)	4.91 (2.09)	0.51 (1.96)	0.98 (2.66)	2.60 (3.05)	9.54 (6.90)	0.78 (5.00)	0.50 (5.82)	2.45 (3.05)	0.65 (1.87)	0.21 (1.61)	0.14 (1.36)	2.42 (0.87)
Kazakhstan	4390	2.13 (19.89)	1.90 (5.49)	486.95 (79.69)	4.22 (4.10)	0.51 (3.49)	0.80 (4.58)	2.71 (4.40)	10.04 (10.99)	0.17 (8.60)	0.79 (7.14)	2.64 (3.44)	0.81 (2.75)	0.08 (1.94)	0.11 (2.16)	1.99 (0.87)
Korea	5166	2.43 (30.47)	1.21 (8.45)	612.79 (89.87)	4.11 (3.69)	0.48 (5.52)	0.40 (6.12)	2.84 (4.24)	11.36 (19.30)	-1.91 (15.02)	-1.37 (16.26)	1.91 (6.79)	0.99 (1.33)	0.01 (0.79)	0.01 (1.07)	2.12 (0.92)
Lebanon	3974	3.62 (13.67)	2.18 (3.46)	449.33 (74.75)	4.55 (3.95)	0.45 (1.91)	0.91 (2.61)	1.11 (2.87)	9.36 (7.29)	0.36 (5.66)	0.50 (5.15)	2.21 (3.00)	0.77 (1.62)	0.07 (0.95)	0.17 (1.43)	2.35 (0.81)
Lithuania	4747	2.92 (7.39)	1.39 (2.33)	502.37 (78.95)	4.05 (1.37)	0.51 (1.31)	0.67 (1.81)	2.78 (1.37)	10.44 (4.01)	-0.35 (3.97)	0.19 (3.34)	2.18 (1.61)	0.92 (0.69)	0.06 (0.63)	0.01 (0.30)	1.89 (0.92)
Macedonia	4062	2.56 (7.69)	1.99 (2.43)	426.14 (108.64)	4.23 (1.14)	0.51 (1.21)	0.70 (1.71)	2.74 (1.64)	9.91 (3.83)	0.57 (3.42)	0.64 (3.07)	2.48 (1.69)	0.85 (0.85)	0.06 (0.57)	0.09 (0.68)	2.42 (1.01)
Malaysia	5733	3.28 (24.54)	1.23 (7.53)	439.82 (91.85)	3.92 (2.32)	0.49 (4.18)	0.45 (4.63)	1.97 (9.32)	9.08 (14.18)	-0.07 (12.02)	-1.02 (12.31)	2.10 (5.25)	0.88 (2.67)	0.05 (1.84)	0.06 (2.05)	1.77 (0.93)
Morocco	8986	3.34 (21.14)	2.05 (6.25)	371.15 (85.55)	4.26 (7.60)	0.53 (3.26)	0.80 (4.24)	2.02 (6.83)	8.04 (14.35)	0.69 (8.15)	0.19 (10.47)	2.71 (3.43)	0.92 (1.79)	0.03 (1.06)	0.05 (1.48)	1.87 (1.02)
New Zealand	5336	3.31 (10.21)	1.79 (2.76)	487.78 (84.78)	4.31 (1.54)	0.53 (1.62)	0.77 (2.28)	2.69 (2.11)	10.94 (5.48)	-0.47 (5.12)	-0.15 (4.78)	2.09 (2.30)	0.58 (1.60)	0.23 (1.36)	0.19 (1.28)	2.15 (0.91)
Norway	3862	1.94 (10.20)	1.74 (3.51)	474.64 (64.73)	4.99 (1.02)	0.51 (2.00)	0.88 (2.96)	2.76 (2.31)	11.59 (6.18)	-0.41 (5.74)	0.19 (5.25)	2.22 (2.88)	0.78 (1.67)	0.14 (1.39)	0.08 (1.11)	1.99 (0.83)
Oman	9542	4.27 (7.47)	2.15 (1.92)	366.15 (108.16)	4.74 (1.62)	0.49 (1.07)	0.93 (1.35)	2.05 (2.17)	9.05 (4.29)	0.50 (2.63)	0.03 (3.23)	2.47 (1.47)	0.74 (0.93)	0.08 (0.59)	0.17 (0.81)	2.36 (0.79)
Palestine	7812	3.58 (11.14)	2.22 (3.15)	404.18 (100.43)	4.95 (1.88)	0.48 (1.68)	0.89 (2.25)	2.75 (2.14)	9.17 (6.23)	0.65 (4.42)	0.21 (5.11)	2.40 (2.54)	0.79 (1.37)	0.11 (1.05)	0.10 (1.02)	2.01 (0.89)
Qatar	4422	3.65 (6.17)	2.10 (1.56)	409.60 (110.16)	4.86 (1.36)	0.50 (0.82)	0.89 (1.12)	2.05 (1.64)	10.67 (2.76)	0.09 (2.72)	0.17 (2.54)	2.08 (1.44)	0.37 (0.79)	0.20 (0.66)	0.43 (0.81)	1.98 (1.11)
Romania	5523	3.66 (20.82)	1.52 (6.65)	457.95 (101.86)	4.07 (3.88)	0.52 (3.18)	0.51 (4.22)	2.91 (2.26)	9.89 (11.06)	-0.05 (9.55)	0.28 (8.40)	2.37 (4.38)	0.99 (0.74)	0.01 (0.47)	0.01 (0.58)	2.14 (1.00)
Russia	4893	2.65 (42.67)	1.84 (13.96)	538.98 (81.13)	4.08 (8.27)	0.51 (7.73)	0.67 (10.52)	2.74 (9.69)	10.84 (23.78)	-0.10 (21.05)	0.56 (18.95)	2.28 (9.58)	0.83 (5.75)	0.12 (5.07)	0.04 (3.16)	2.17 (0.98)

Saudi Arabia	4344	2.84	2.16	393.82	4.76	0.52	0.93	2.31	9.35	0.31	-0.25	2.22	0.80	0.11	0.09	1.90
		(28.00)	(8.33)	(93.47)	(8.02)	(4.51)	(6.23)	(9.40)	(17.69)	(12.53)	(14.81)	(7.21)	(3.58)	(2.78)	(2.57)	(0.87)
Singapore	5927	3.71	1.77	610.99	3.89	0.51	0.73	1.81	10.30	-0.28	-0.79	2.19	0.60	0.25	0.15	2.03
		(9.38)	(2.44)	(84.10)	(1.33)	(1.46)	(1.99)	(2.68)	(4.84)	(4.36)	(4.56)	(2.03)	(1.42)	(1.25)	(1.05)	(1.03)
Slovenia	4415	3.18	1.74	504.78	4.95	0.51	0.71	2.55	10.88	-0.75	-0.25	1.55	0.83	0.13	0.04	2.09
		(5.70)	(1.68)	(70.48)	(0.49)	(1.00)	(1.30)	(1.59)	(2.73)	(2.71)	(2.87)	(1.51)	(0.76)	(0.68)	(0.39)	(0.86)
Sweden	5573	1.81	1.66	484.31	3.97	0.52	0.81	2.71	11.33	-0.70	-0.03	1.93	0.72	0.19	0.09	2.26
		(9.74)	(3.22)	(67.55)	(1.26)	(2.08)	(2.83)	(2.68)	(6.68)	(5.56)	(5.71)	(2.83)	(1.87)	(1.65)	(1.17)	(0.88)
Syria	4413	3.36	2.21	380.17	5.10	0.50	0.86	2.57	8.72	0.79	0.15	2.64	0.80	0.03	0.17	1.89
		(29.38)	(8.26)	(96.88)	(8.18)	(4.38)	(5.67)	(7.32)	(17.00)	(11.11)	(12.99)	(5.44)	(3.50)	(1.42)	(3.31)	(0.98)
Taiwan	5042	2.58	0.79	609.28	4.64	0.52	0.40	2.46	10.39	-1.22	-0.99	2.06	0.92	0.04	0.04	2.13
		(22.01)	(6.44)	(105.91)	(3.75)	(3.88)	(4.82)	(5.12)	(13.09)	(12.02)	(13.16)	(5.38)	(2.13)	(1.52)	(1.56)	(0.84)
Thailand	6124	4.97	1.75	427.11	4.27	0.45	0.48	2.16	8.48	0.17	-0.29	2.36	0.96	0.01	0.03	2.17
		(40.73)	(8.94)	(85.88)	(6.68)	(5.85)	(6.34)	(11.36)	(21.62)	(13.44)	(16.68)	(6.17)	(2.24)	(1.24)	(1.89)	(1.04)
Tunisia	5128	3.06	2.19	424.74	4.57	0.48	0.79	1.00	8.95	0.52	0.24	2.56	0.94	0.03	0.03	1.90
		(16.37)	(5.00)	(75.44)	(4.65)	(2.65)	(3.58)	(4.23)	(9.95)	(7.12)	(7.93)	(3.35)	(1.30)	(0.98)	(0.90)	(1.13)
Turkey	6928	3.49	2.03	452.49	4.82	0.51	0.65	2.70	8.38	0.16	0.23	2.48	0.96	0.03	0.01	2.47
		(44.25)	(13.20)	(113.08)	(8.11)	(6.49)	(9.26)	(9.12)	(27.78)	(17.13)	(17.85)	(8.92)	(2.48)	(2.03)	(1.47)	(0.85)
UAE	14089	3.62	2.16	479.19	4.90	0.50	0.94	2.11	10.32	0.31	0.24	2.20	0.33	0.29	0.38	2.19
		(6.38)	(1.65)	(89.84)	(1.64)	(0.93)	(1.27)	(1.81)	(3.10)	(2.71)	(2.79)	(1.53)	(0.87)	(0.84)	(0.90)	(0.97)
Ukraine	3378	2.53	1.60	455.72	4.64	0.50	0.57	1.93	10.45	0.53	0.83	2.50	0.84	0.13	0.03	2.36
		(29.05)	(9.31)	(88.39)	(5.51)	(5.28)	(6.15)	(11.38)	(15.79)	(13.00)	(10.43)	(5.86)	(3.87)	(3.54)	(1.82)	(0.78)
United States	10477	2.94	1.99	509.48	4.60	0.49	0.91	2.64	10.88	-0.19	-0.15	1.95	0.73	0.19	0.08	2.17
		(54.91)	(16.38)	(77.05)	(9.89)	(8.89)	(13.27)	(12.08)	(31.61)	(28.13)	(27.97)	(14.77)	(7.89)	(6.95)	(4.85)	(0.84)

Table 2
School-Level Descriptive Statistics

Country	N	School Size (SD)	Urban (SD)	Discipline Policy (SD)	Attach-ment (SD)	Parent Involve. (SD)
Armenia	153	32 (68)	3.36 (3.28)	-0.46 (4.44)	2.22 (1.33)	0.82 (1.13)
Australia	277	107 (235)	2.50 (3.80)	-0.27 (5.15)	2.58 (2.39)	1.37 (2.69)
Bahrain	95	153 (111)	2.61 (1.13)	0.35 (1.50)	2.52 (0.73)	1.04 (0.61)
Chile	193	55 (380)	2.19 (7.19)	0.49 (7.57)	2.16 (4.27)	0.85 (3.88)
England	118	163 (430)	2.60 (6.34)	-0.89 (7.75)	2.86 (4.03)	1.42 (4.39)
Finland	145	89 (101)	3.76 (2.34)	-1.15 (3.15)	2.38 (1.13)	1.07 (1.12)
Georgia	172	23 (86)	3.52 (3.81)	0.23 (4.32)	2.24 (1.74)	0.83 (1.80)
Ghana	161	46 (257)	3.56 (8.76)	0.36 (8.53)	2.35 (5.48)	0.81 (4.40)
Hong Kong	117	165 (76)	1.70 (1.53)	-1.43 (2.70)	2.54 (1.17)	0.99 (1.28)
Hungary	146	35 (93)	3.12 (5.45)	-0.05 (5.77)	1.91 (2.86)	0.86 (2.23)
Indonesia	153	101 (1423)	2.74 (17.15)	0.73 (10.16)	2.53 (11.53)	1.31 (12.43)
Iran	238	44 (427)	3.16 (13.83)	0.70 (10.53)	2.57 (8.28)	1.09 (7.36)
Italy	197	99 (384)	3.88 (6.89)	-0.36 (7.76)	2.36 (3.26)	0.98 (3.32)
Japan	138	110 (691)	2.80 (8.49)	-1.88 (16.23)	2.29 (6.42)	1.21 (5.29)
Jordan	230	62 (158)	2.89 (3.70)	0.80 (3.29)	2.22 (2.26)	1.10 (1.87)
Kazakhstan	147	37 (235)	4.08 (8.02)	-0.62 (10.61)	2.79 (3.25)	1.41 (3.66)
Korea	150	197 (707)	2.72 (5.96)	0.52 (5.72)	2.28 (3.63)	1.17 (4.02)
Lebanon	147	41 (149)	2.97 (3.68)	0.47 (4.16)	2.32 (2.03)	0.90 (1.86)
Lithuania	141	45 (181)	3.38 (2.87)	-0.36 (3.25)	2.20 (1.16)	0.87 (1.11)
Macdedonia	150	75 (65)	3.13 (2.07)	-0.16 (2.32)	2.41 (0.90)	1.16 (0.92)
Malaysia	180	231 (423)	3.10 (3.96)	0.56 (3.52)	2.28 (2.22)	1.03 (2.22)
Morocco	279	180 (384)	2.55 (3.80)	0.35 (3.44)	2.26 (2.45)	1.02 (1.93)
New Zealand	158	136 (183)	2.75 (2.09)	-1.00 (2.55)	2.64 (1.05)	1.33 (1.09)

Norway	134	58 (130)	. (.)	-0.73 (3.81)	2.39 (1.38)	1.17 (1.38)
Oman	323	65 (101)	3.11 (1.82)	-0.39 (1.96)	2.76 (1.09)	1.02 (0.91)
Palestine	201	68 (158)	3.23 (3.21)	0.61 (3.06)	2.37 (1.96)	1.00 (1.41)
Qatar	109	108 (104)	2.39 (1.24)	0.41 (1.57)	2.82 (0.74)	1.41 (0.73)
Romania	147	40 (311)	3.70 (7.06)	0.75 (6.86)	2.09 (4.18)	0.78 (4.08)
Russia	210	35 (396)	3.89 (17.68)	-0.19 (17.42)	2.12 (5.69)	0.71 (6.35)
Saudi Arabia	153	53 (301)	2.77 (8.69)	0.00 (8.78)	2.43 (4.84)	1.02 (4.86)
Singapore	165	304 (66)	1.00 (0.00)	-0.86 (1.48)	2.80 (0.61)	1.17 (0.64)
Slovenia	186	39 (33)	3.18 (1.72)	0.09 (1.92)	2.28 (0.97)	0.93 (0.88)
Sweden	153	65 (137)	3.28 (4.18)	-1.46 (4.52)	2.50 (1.77)	0.98 (1.71)
Syria	148	69 (440)	3.49 (6.22)	0.27 (7.46)	2.34 (4.82)	0.87 (3.68)
Taiwan	150	337 (700)	2.82 (3.29)	-0.17 (3.14)	2.56 (1.50)	1.50 (1.39)
Thailand	172	84 (970)	3.96 (10.78)	-0.16 (9.15)	2.16 (5.17)	1.33 (4.32)
Tunisia	207	154 (200)	2.72 (2.57)	0.17 (2.75)	1.77 (1.70)	0.71 (0.88)
Turkey	239	68 (548)	2.98 (9.72)	0.53 (9.62)	1.83 (6.93)	0.80 (4.77)
UAE	458	90 (89)	2.52 (1.41)	0.11 (1.46)	2.80 (0.79)	1.33 (0.86)
Ukraine	148	26 (246)	3.81 (11.48)	-0.73 (16.70)	2.25 (4.38)	0.89 (4.90)
United States	501	120 (977)	2.92 (10.11)	0.02 (11.37)	2.58 (6.31)	1.42 (6.65)

Table 3
Within-School Parameter Estimates (Set I)

Country	0-PARM (SE)	INT (SE)	SUPP (SE)	ACH (SE)	AGE (SE)	MALE (SE)	SLFEST (SE)
Armenia	-0.054	3.691*	0.060	-0.002*	-0.038	0.202*	-0.041
	(0.058)	(1.851)	(0.031)	(0.000)	(0.050)	(0.062)	(0.056)
Australia	-1.535*	1.897*	0.022	-0.001*	0.007	0.197*	-0.041
	(0.092)	(0.516)	(0.026)	(0.000)	(0.049)	(0.058)	(0.034)
Bahrain	-1.124*	3.197*	0.021	-0.001*	0.012	0.301*	-0.001
	(0.063)	(0.514)	(0.020)	(0.000)	(0.023)	(0.065)	(0.033)
Chile	-1.934*	1.594*	0.075*	0.000	0.018	0.293*	-0.122*
	(0.081)	(0.759)	(0.023)	(0.001)	(0.034)	(0.042)	(0.036)
England	-1.129*	-0.059	0.050	0.000	0.061	0.100*	-0.071
	(0.073)	(1.212)	(0.031)	(0.001)	(0.047)	(0.042)	(0.048)
Finland	-1.188*	1.626	0.048	-0.001	-0.030	0.231*	0.016
	(0.066)	(1.643)	(0.031)	(0.001)	(0.092)	(0.050)	(0.043)
Ghana	-2.190*	2.031*	0.020	-0.001*	0.003	0.047*	-0.045*
	(0.106)	(0.456)	(0.012)	(0.000)	(0.006)	(0.021)	(0.018)
Georgia	-0.222*	3.303*	0.037	-0.001*	0.067	0.115	-0.040
	(0.066)	(1.570)	(0.033)	(0.000)	(0.057)	(0.064)	(0.063)
Hong Kong	-2.054*	0.794	0.047	0.000	-0.014	0.269*	0.001
	(0.070)	(0.451)	(0.024)	(0.000)	(0.027)	(0.033)	(0.033)
Hungary	-1.761*	2.568*	0.024	0.000	-0.017	0.037	-0.019
	(0.072)	(0.633)	(0.029)	(0.000)	(0.025)	(0.034)	(0.034)
Indonesia	-1.191*	2.560*	0.019	0.000	-0.029	0.006	-0.024
	(0.081)	(0.632)	(0.028)	(0.000)	(0.022)	(0.031)	(0.031)
Iran	-1.206*	1.554*	0.015	-0.001*	-0.004	0.146	-0.048
	(0.062)	(0.716)	(0.022)	(0.000)	(0.023)	(0.192)	(0.037)
Italy	-1.199*	1.898	0.025	-0.001	0.059	0.080	-0.057
	(0.092)	(1.037)	(0.036)	(0.001)	(0.059)	(0.057)	(0.064)
Japan	-1.062*	3.759*	-0.010	-0.001*	-0.030	0.328*	0.032
	(0.057)	(1.239)	(0.031)	(0.000)	(0.036)	(0.046)	(0.039)
Jordan	-1.215*	3.193*	0.068*	-0.002*	-0.020	0.284*	-0.108*
	(0.066)	(1.173)	(0.025)	(0.000)	(0.033)	(0.086)	(0.030)
Korea	-1.029*	-0.482	0.009	0.000	-0.067	0.212*	-0.012
	(0.056)	(2.135)	(0.047)	(0.000)	(0.053)	(0.099)	(0.059)
Kazakhstan	-0.251*	2.128	-0.009	-0.001	0.076*	0.177*	-0.040
	(0.071)	(1.138)	(0.037)	(0.001)	(0.034)	(0.043)	(0.049)
Lebanon	-1.585*	2.554*	0.012	-0.001*	0.032	0.288*	-0.024
	(0.109)	(0.508)	(0.026)	(0.000)	(0.019)	(0.044)	(0.031)
Lithuania	-1.844*	1.925	0.071*	-0.001*	0.034	0.018	-0.064
	(0.083)	(1.786)	(0.028)	(0.000)	(0.038)	(0.038)	(0.046)
Macedonia	-0.913*	1.088	0.015	-0.002*	0.001	0.062	-0.061
	(0.063)	(1.224)	(0.025)	(0.001)	(0.059)	(0.054)	(0.049)

Malaysia	-1.581*	1.724*	0.018	0.000	-0.040	0.154*	-0.051
	(0.071)	(0.581)	(0.016)	(0.000)	(0.059)	(0.033)	(0.030)
Morocco	-1.515*	1.817*	0.014	-0.001*	0.012	0.255*	-0.019
	(0.073)	(0.526)	(0.017)	(0.000)	(0.016)	(0.036)	(0.031)
Norway	-0.953*	3.245	0.087*	-0.001	-0.032	0.174*	-0.082
	(0.068)	(2.438)	(0.036)	(0.001)	(0.090)	(0.053)	(0.053)
New Zealand	-1.634*	0.134	0.059*	-0.001*	0.039	0.182*	0.021
	(0.075)	(0.937)	(0.023)	(0.000)	(0.035)	(0.034)	(0.030)
Oman	-1.734*	1.933*	0.038*	-0.001*	0.005	0.198*	-0.140*
	(0.062)	(0.388)	(0.017)	(0.000)	(0.015)	(0.045)	(0.020)
Palestine	-1.514*	2.687*	0.027	-0.001*	0.012	0.669*	-0.018
	(0.109)	(0.989)	(0.019)	(0.000)	(0.031)	(0.148)	(0.040)
Qatar	-1.184*	2.245*	-0.003	-0.001*	-0.023	0.270*	-0.030
	(0.065)	(0.548)	(0.028)	(0.000)	(0.018)	(0.051)	(0.031)
Romania	-1.860*	2.040	0.037*	-0.002*	0.060*	0.066*	-0.048
	(0.069)	(1.228)	(0.017)	(0.000)	(0.027)	(0.029)	(0.031)
Russia	-1.296*	1.436	0.004	-0.001	0.067	0.161*	-0.061
	(0.064)	(0.769)	(0.035)	(0.001)	(0.044)	(0.042)	(0.050)
Saudi Arabia	-1.083*	1.593	0.015	-0.001*	0.036	0.257*	-0.119*
	(0.089)	(0.884)	(0.032)	(0.000)	(0.025)	(0.118)	(0.059)
Singapore	-1.908*	2.474*	0.034	-0.001*	-0.039	0.293*	-0.008
	(0.047)	(0.474)	(0.018)	(0.000)	(0.030)	(0.025)	(0.022)
Slovenia	-1.999*	0.941	0.033	0.000	0.084	0.188*	-0.098*
	(0.079)	(1.524)	(0.025)	(0.000)	(0.074)	(0.037)	(0.034)
Sweden	-0.855*	-0.780	-0.003	-0.001	0.000	0.113*	0.012
	(0.076)	(1.797)	(0.041)	(0.001)	(0.072)	(0.052)	(0.049)
Syria	-1.414*	1.990*	0.055*	-0.001*	0.021	0.252*	-0.187*
	(0.083)	(0.785)	(0.025)	(0.000)	(0.022)	(0.053)	(0.044)
Thailand	-2.252*	1.799*	0.025	0.000	0.044	0.055	-0.112*
	(0.099)	(0.388)	(0.026)	(0.000)	(0.027)	(0.047)	(0.034)
Tunisia	-1.679*	2.027*	0.025	-0.001*	0.039*	0.381*	-0.076*
	(0.076)	(0.551)	(0.020)	(0.000)	(0.019)	(0.037)	(0.036)
Turkey	-1.235*	2.211*	-0.030	-0.001*	0.036	0.188*	-0.007
	(0.059)	(0.538)	(0.022)	(0.000)	(0.022)	(0.035)	(0.032)
Taiwan	-0.967*	-0.604	0.022	-0.001*	0.027	0.265*	0.043
	(0.078)	(1.319)	(0.022)	(0.000)	(0.048)	(0.044)	(0.063)
UAE	-1.503*	2.719*	0.015	-0.001*	0.015	0.364*	-0.063*
	(0.036)	(0.314)	(0.012)	(0.000)	(0.010)	(0.033)	(0.017)
Ukraine	-1.502*	4.151*	0.062	-0.001*	0.065	0.137*	-0.187*
	(0.103)	(1.274)	(0.043)	(0.000)	(0.048)	(0.058)	(0.056)
USA	-1.419*	1.080*	0.035	0.000	0.055	0.095*	-0.049
	(0.065)	(0.386)	(0.022)	(0.000)	(0.036)	(0.035)	(0.030)

Note. *$p < .05$.

Table 4
Within-School Parameter Estimates (Set II)

Country	TEAREL (SE)	PINV (SE)	SATCH (SE)	SES (SE)	CHIMM (SE)	FGNBOR (SE)	AGEIMM (SE)	LANG (SE)
Armenia	-0.111*	-0.059*	0.003	-0.019	0.121	-0.770*	0.315*	0.046
	(0.029)	(0.027)	(0.041)	(0.023)	(0.096)	(0.390)	(0.127)	(0.051)
Australia	-0.004	0.017	-0.185*	0.048*	-0.076	-0.161	0.034	-0.063
	(0.021)	(0.013)	(0.028)	(0.016)	(0.058)	(0.173)	(0.069)	(0.041)
Bahrain	-0.035*	0.003	-0.046*	-0.011	0.042	0.225*	-0.036	-0.045*
	(0.012)	(0.010)	(0.019)	(0.010)	(0.053)	(0.074)	(0.033)	(0.017)
Chile	-0.003	0.013	-0.186*	-0.009	0.203	0.182	0.019	-0.043
	(0.015)	(0.014)	(0.023)	(0.016)	(0.114)	(0.319)	(0.128)	(0.037)
England	-0.003	-0.014	-0.185*	0.024	-0.004	-0.028	0.032	-0.104*
	(0.018)	(0.015)	(0.026)	(0.016)	(0.069)	(0.167)	(0.070)	(0.044)
Finland	-0.003	0.023	-0.279*	0.042*	0.050	0.400	-0.156	-0.070
	(0.022)	(0.015)	(0.027)	(0.016)	(0.079)	(0.303)	(0.112)	(0.044)
Ghana	-0.011	0.016	-0.026	0.009	0.007	-0.147	0.099*	0.023
	(0.010)	(0.009)	(0.018)	(0.005)	(0.038)	(0.080)	(0.034)	(0.014)
Georgia	-0.023	-0.026	-0.082*	-0.051*	0.228*	0.282	-0.053	-0.086
	(0.034)	(0.025)	(0.039)	(0.019)	(0.105)	(0.232)	(0.105)	(0.059)
Hong Kong	-0.023	0.041*	-0.060*	-0.012	0.121*	-0.122	0.071*	-0.027
	(0.015)	(0.010)	(0.024)	(0.009)	(0.035)	(0.083)	(0.033)	(0.027)
Hungary	0.006	0.011	-0.116*	-0.004	-0.012	-0.185	0.061	-0.163*
	(0.015)	(0.014)	(0.022)	(0.013)	(0.070)	(0.209)	(0.087)	(0.047)
Indonesia	0.005	0.015	-0.011	0.010	0.176*	0.067	0.020	-0.016
	(0.016)	(0.011)	(0.030)	(0.012)	(0.059)	(0.112)	(0.057)	(0.022)
Iran	-0.031*	-0.012	-0.032	-0.015	-0.048	0.209	-0.035	-0.008
	(0.012)	(0.016)	(0.027)	(0.010)	(0.076)	(0.152)	(0.066)	(0.023)
Italy	0.019	0.012	-0.200*	0.018	-0.003	0.257	-0.015	-0.025
	(0.028)	(0.023)	(0.050)	(0.021)	(0.093)	(0.254)	(0.091)	(0.042)
Japan	-0.010	0.058*	-0.163*	0.053*	0.130	-0.037	-0.053	-0.129*
	(0.024)	(0.012)	(0.020)	(0.014)	(0.122)	(0.401)	(0.163)	(0.050)
Jordan	-0.021	0.008	-0.076*	-0.013	0.032	0.372*	-0.081*	-0.008
	(0.017)	(0.015)	(0.030)	(0.012)	(0.049)	(0.084)	(0.037)	(0.024)
Korea	0.001	0.016	-0.183*	0.031	-0.060	-0.197	0.073	-0.195*
	(0.015)	(0.015)	(0.034)	(0.023)	(0.117)	(0.579)	(0.248)	(0.063)
Kazakhstan	0.029	-0.019	-0.218*	0.007	-0.083	0.003	0.015	0.028
	(0.021)	(0.021)	(0.042)	(0.015)	(0.069)	(0.145)	(0.072)	(0.040)
Lebanon	-0.026	0.035	0.020	-0.004	0.147*	0.243*	-0.047	-0.011
	(0.015)	(0.019)	(0.023)	(0.014)	(0.074)	(0.101)	(0.039)	(0.024)
Lithuania	0.004	0.002	-0.339*	-0.004	0.023	-1.449*	0.526*	0.003
	(0.016)	(0.018)	(0.026)	(0.015)	(0.104)	(0.568)	(0.217)	(0.039)
Macedonia	0.020	-0.062*	-0.120*	-0.014	-0.031	-0.338*	0.252*	-0.002
	(0.020)	(0.020)	(0.043)	(0.022)	(0.080)	(0.159)	(0.075)	(0.045)

Malaysia	-0.033*	0.012	-0.071*	0.008	-0.030	0.086	0.027	0.012
	(0.010)	(0.009)	(0.024)	(0.010)	(0.045)	(0.110)	(0.046)	(0.016)
Norway	-0.020	-0.009	-0.017	-0.009	-0.084	0.134	0.035	-0.003
	(0.013)	(0.012)	(0.030)	(0.009)	(0.085)	(0.110)	(0.055)	(0.016)
Morocco	-0.014	0.004	-0.267*	-0.015	0.046	0.208	0.035	-0.075
	(0.024)	(0.020)	(0.045)	(0.020)	(0.075)	(0.287)	(0.123)	(0.043)
New Zealand	-0.006	0.015	-0.220*	0.039*	0.019	0.135	-0.091	-0.065*
	(0.014)	(0.012)	(0.020)	(0.010)	(0.035)	(0.130)	(0.067)	(0.027)
Oman	0.012	-0.006	-0.057*	0.003	0.085*	0.094	0.034	0.014
	(0.012)	(0.009)	(0.019)	(0.006)	(0.037)	(0.052)	(0.024)	(0.015)
Palestine	-0.023	-0.016	-0.042	-0.017	-0.041	0.181	-0.019	-0.029
	(0.016)	(0.013)	(0.026)	(0.010)	(0.047)	(0.135)	(0.053)	(0.038)
Qatar	-0.021	0.004	-0.080*	0.001	0.046	0.172*	-0.027	0.021
	(0.011)	(0.011)	(0.022)	(0.012)	(0.046)	(0.060)	(0.021)	(0.024)
Romania	-0.022	-0.006	-0.064*	-0.013	0.052	-0.047	0.050	-0.084*
	(0.014)	(0.014)	(0.023)	(0.012)	(0.120)	(0.209)	(0.101)	(0.040)
Russia	-0.022	-0.064*	-0.105*	-0.003	0.018	-0.382	0.118	-0.035
	(0.016)	(0.019)	(0.031)	(0.017)	(0.056)	(0.379)	(0.153)	(0.054)
Saudi Arabia	0.021	-0.001	-0.037	-0.010	0.014	0.123	0.006	-0.032
	(0.023)	(0.013)	(0.032)	(0.016)	(0.066)	(0.120)	(0.048)	(0.030)
Singapore	-0.016	0.016*	-0.142*	-0.002	0.060*	-0.101	0.033	0.002
	(0.010)	(0.008)	(0.017)	(0.007)	(0.026)	(0.093)	(0.037)	(0.015)
Slovenia	0.015	0.012	-0.128*	0.006	-0.006	-0.345	0.195	-0.022
	(0.014)	(0.013)	(0.023)	(0.013)	(0.051)	(0.270)	(0.100)	(0.030)
Sweden	-0.027	-0.036*	-0.258*	0.034*	0.025	0.622*	-0.210*	-0.046
	(0.025)	(0.017)	(0.046)	(0.017)	(0.077)	(0.259)	(0.107)	(0.042)
Syria	-0.013	0.002	-0.046	-0.004	-0.075	0.271*	-0.049	-0.010
	(0.019)	(0.014)	(0.038)	(0.013)	(0.093)	(0.117)	(0.050)	(0.022)
Thailand	-0.004	0.026*	-0.044	0.005	0.164	-0.253	0.168	-0.013
	(0.016)	(0.012)	(0.030)	(0.011)	(0.159)	(0.313)	(0.147)	(0.024)
Tunisia	0.001	-0.019	-0.101*	0.001	0.060	0.035	0.002	0.065*
	(0.014)	(0.011)	(0.024)	(0.011)	(0.075)	(0.198)	(0.074)	(0.021)
Turkey	0.015	-0.003	-0.062*	-0.005	-0.133	-0.017	-0.001	-0.009
	(0.016)	(0.012)	(0.020)	(0.009)	(0.107)	(0.168)	(0.084)	(0.022)
Taiwan	0.010	-0.002	-0.133*	0.022	-0.092	0.616	-0.175	-0.008
	(0.026)	(0.011)	(0.028)	(0.016)	(0.093)	(0.416)	(0.149)	(0.025)
UAE	-0.011	-0.004	-0.086*	-0.011	0.008	-0.096	0.041*	-0.008
	(0.008)	(0.006)	(0.011)	(0.007)	(0.026)	(0.052)	(0.018)	(0.012)
Ukraine	0.001	-0.055*	-0.237*	-0.021	-0.089	0.255	-0.036	0.006
	(0.026)	(0.027)	(0.047)	(0.022)	(0.081)	(0.226)	(0.094)	(0.034)
USA	-0.009	0.005	-0.225*	0.017	-0.041	-0.160	0.058	-0.103*
	(0.016)	(0.015)	(0.024)	(0.011)	(0.059)	(0.179)	(0.067)	(0.029)

Note. *$p < .05$.

Table 5
Between-School Parameter Estimates (Set I)

Country	SCHSIZE (SE)	URBAN (SE)	DISPOL (SE)	ATCH (SE)	PINV (SE)	MSUPP (SE)	MACH (SE)	MAGE (SE)
Armenia	0.001	-0.020	-0.012	-0.023	0.051	0.148	-0.002*	0.090
	(0.002)	(0.048)	(0.031)	(0.099)	(0.105)	(0.297)	(0.001)	(0.254)
Australia	0.000	0.063*	0.009	-0.007	-0.005	-0.082	0.000	0.071
	(0.000)	(0.018)	(0.012)	(0.031)	(0.027)	(0.116)	(0.001)	(0.081)
Bahrain	0.000	0.017	0.003	-0.043	0.026	0.022	-0.001	-0.159
	(0.000)	(0.011)	(0.012)	(0.023)	(0.027)	(0.131)	(0.001)	(0.099)
Chile	0.000	-0.016	0.020	0.019	-0.048	0.148	-0.002*	0.053
	(0.000)	(0.023)	(0.015)	(0.043)	(0.033)	(0.151)	(0.001)	(0.164)
England	0.000	0.060*	0.003	-0.093	0.023	0.181	0.000	0.349
	(0.000)	(0.023)	(0.017)	(0.048)	(0.045)	(0.181)	(0.001)	(0.289)
Finland	-0.001*	0.066*	-0.007	-0.012	-0.018	0.199	0.001	-0.140
	(0.000)	(0.029)	(0.014)	(0.045)	(0.053)	(0.161)	(0.001)	(0.397)
Ghana	0.000	-0.012	-0.005	0.008	0.059*	0.060	0.000	-0.100*
	(0.000)	(0.017)	(0.019)	(0.025)	(0.030)	(0.095)	(0.000)	(0.041)
Georgia	0.001	-0.026	0.041	0.005	-0.178*	0.035	0.000	-0.250
	(0.001)	(0.035)	(0.027)	(0.050)	(0.061)	(0.167)	(0.001)	(0.307)
Hong Kong	0.000	0.012	-0.031*	-0.061	-0.009	0.182	0.000	0.052
	(0.001)	(0.025)	(0.010)	(0.040)	(0.036)	(0.102)	(0.000)	(0.096)
Hungary	-0.001	0.020	0.041*	0.018	0.102*	0.138	-0.001	0.067
	(0.001)	(0.016)	(0.019)	(0.035)	(0.039)	(0.155)	(0.001)	(0.086)
Indonesia	0.000	-0.048*	-0.026	0.012	-0.061	0.074	0.000	0.068
	(0.000)	(0.024)	(0.030)	(0.034)	(0.036)	(0.138)	(0.001)	(0.098)
Iran	0.000	0.003	-0.031	0.006	-0.018	0.204	0.000	0.204
	(0.001)	(0.027)	(0.031)	(0.050)	(0.048)	(0.148)	(0.001)	(0.170)
Italy	0.000	0.007	-0.011	-0.001	-0.018	0.284	0.000	-0.159
	(0.000)	(0.024)	(0.021)	(0.056)	(0.061)	(0.187)	(0.001)	(0.190)
Japan	0.000	-0.038	-0.002	-0.025	0.077*	-0.146	-0.001	0.034
	(0.000)	(0.024)	(0.011)	(0.033)	(0.033)	(0.155)	(0.001)	(0.265)
Jordan	0.001*	0.020	0.012	-0.012	-0.016	-0.104	0.002*	-0.174
	(0.000)	(0.024)	(0.018)	(0.043)	(0.038)	(0.157)	(0.001)	(0.243)
Korea	0.000	0.050	0.017	-0.016	-0.074	-0.162	-0.001	0.759*
	(0.000)	(0.027)	(0.019)	(0.041)	(0.043)	(0.238)	(0.001)	(0.386)
Kazakhstan	0.001	0.004	0.075	0.017	-0.083	0.281	0.000	-0.106
	(0.001)	(0.044)	(0.042)	(0.109)	(0.105)	(0.222)	(0.001)	(0.223)
Lebanon	0.001	0.033	0.036	-0.030	-0.067	0.246	-0.004*	-0.006
	(0.001)	(0.041)	(0.033)	(0.076)	(0.093)	(0.187)	(0.001)	(0.109)
Lithuania	0.000	0.055	-0.019	0.026	-0.065	-0.012	-0.001	0.119
	(0.000)	(0.031)	(0.019)	(0.064)	(0.067)	(0.188)	(0.001)	(0.306)
Macedonia	0.000	0.007	-0.001	-0.017	-0.043	0.085	0.000	0.245
	(0.001)	(0.022)	(0.021)	(0.049)	(0.046)	(0.132)	(0.001)	(0.275)

Malaysia	0.000	0.013	0.011	0.016	-0.006	0.146	-0.001	0.156
	(0.000)	(0.019)	(0.016)	(0.035)	(0.039)	(0.098)	(0.001)	(0.175)
Morocco	0.000	-0.004	0.008	-0.025	0.049	0.009	-0.001	0.083
	(0.000)	(0.017)	(0.014)	(0.020)	(0.032)	(0.084)	(0.001)	(0.062)
Norway	0.032	.(.)	0.032	0.144	-0.084	0.237	-0.001	-0.324
	(0.017)		(0.017)	(0.079)	(0.061)	(0.190)	(0.002)	(0.425)
New Zealand	0.000	0.041	0.005	0.001	0.007	-0.034	-0.001	0.140
	(0.000)	(0.021)	(0.011)	(0.030)	(0.035)	(0.120)	(0.001)	(0.170)
Oman	0.000	0.026*	0.015	-0.009	-0.028	0.063	0.000	-0.018
	(0.000)	(0.012)	(0.010)	(0.024)	(0.022)	(0.079)	(0.000)	(0.060)
Palestine	0.000	0.022	-0.020	-0.030	0.009	-0.050	0.000	-0.054
	(0.000)	(0.020)	(0.023)	(0.030)	(0.040)	(0.166)	(0.001)	(0.155)
Qatar	0.000	-0.028	-0.015	0.062	-0.040	-0.076	-0.002*	-0.019
	(0.000)	(0.021)	(0.020)	(0.048)	(0.051)	(0.153)	(0.001)	(0.077)
Romania	0.000	-0.011	-0.032	-0.026	0.014	-0.142	-0.001	-0.015
	(0.000)	(0.022)	(0.023)	(0.065)	(0.053)	(0.107)	(0.001)	(0.169)
Russia	-0.001	-0.029	-0.019	0.074	-0.062	0.375*	0.001	0.010
	(0.001)	(0.022)	(0.022)	(0.063)	(0.067)	(0.117)	(0.001)	(0.121)
Saudi Arabia	0.001	-0.059	0.047	-0.018	0.004	-0.049	-0.001	0.231
	(0.001)	(0.040)	(0.045)	(0.050)	(0.069)	(0.361)	(0.002)	(0.151)
Singapore	0.000	.(.)	-0.012	-0.009	0.044	0.094	0.000	-0.154
	(0.000)		(0.008)	(0.029)	(0.028)	(0.083)	(0.000)	(0.100)
Slovenia	0.000	-0.002	-0.033	-0.042	-0.043	0.157	0.000	-0.107
	(0.001)	(0.022)	(0.020)	(0.044)	(0.045)	(0.130)	(0.001)	(0.351)
Sweden	0.001	0.022	0.015	-0.056	0.118*	0.408*	-0.003	0.740
	(0.001)	(0.028)	(0.016)	(0.064)	(0.057)	(0.185)	(0.002)	(0.443)
Syria	0.000	0.012	0.019	-0.031	-0.043	-0.213	0.000	-0.060
	(0.000)	(0.025)	(0.015)	(0.032)	(0.045)	(0.139)	(0.001)	(0.101)
Thailand	0.000	-0.001	-0.008	-0.046	0.034	0.182	0.000	-0.059
	(0.000)	(0.011)	(0.013)	(0.033)	(0.040)	(0.134)	(0.000)	(0.064)
Tunisia	0.000	-0.029	0.008	0.007	0.031	-0.183	0.001	0.049
	(0.000)	(0.022)	(0.015)	(0.033)	(0.061)	(0.130)	(0.001)	(0.078)
Turkey	0.000	0.000	0.007	0.016	-0.014	0.259*	-0.001	-0.148
	(0.000)	(0.021)	(0.014)	(0.028)	(0.035)	(0.083)	(0.001)	(0.114)
Taiwan	0.000	0.027	0.012	0.078	-0.061	0.316	-0.001	0.327
	(0.000)	(0.026)	(0.017)	(0.054)	(0.040)	(0.164)	(0.001)	(0.247)
UAE	0.000	0.010	-0.013	-0.022	-0.002	-0.064	-0.001*	0.001
	(0.000)	(0.012)	(0.008)	(0.021)	(0.020)	(0.071)	(0.000)	(0.034)
Ukraine	0.002*	0.045	0.041	0.022	-0.119	-0.159	0.001	-0.108
	(0.001)	(0.044)	(0.027)	(0.110)	(0.100)	(0.258)	(0.001)	(0.273)
USA	0.000	0.029*	0.011	0.006	-0.038	-0.136	-0.001	0.076
	(0.000)	(0.013)	(0.012)	(0.025)	(0.024)	(0.082)	(0.001)	(0.088)

Note. *$p < .05$.

Table 6
Between-School Parameter Estimates (Set II)

Country	MMALE (SE)	MSLFEST (SE)	MLANG (SE)	MSES (SE)	MTEAREL (SE)	MPINV (SE)	MSATCH (SE)
Armenia	-0.401	0.405	-0.183	0.004	-0.003	-0.227	-0.555
	(0.635)	(0.462)	(0.282)	(0.094)	(0.169)	(0.193)	(0.339)
Australia	0.268*	0.021	-0.010	-0.062	-0.009	-0.048	-0.081
	(0.110)	(0.132)	(0.086)	(0.049)	(0.039)	(0.062)	(0.098)
Bahrain	-0.056	-0.038	0.011	0.016	0.005	0.168*	-0.035
	(0.093)	(0.164)	(0.044)	(0.042)	(0.052)	(0.070)	(0.098)
Chile	0.129	-0.163	-0.136	0.048	0.034	-0.068	0.241
	(0.118)	(0.187)	(0.173)	(0.052)	(0.057)	(0.076)	(0.150)
England	0.289	-0.099	-0.064	-0.029	-0.023	0.102	0.067
	(0.199)	(0.222)	(0.106)	(0.057)	(0.048)	(0.070)	(0.122)
Finland	0.459*	-0.308	0.171	-0.031	-0.018	0.007	-0.223*
	(0.206)	(0.235)	(0.178)	(0.085)	(0.049)	(0.056)	(0.102)
Ghana	-0.131	0.120	-0.037	0.076	-0.216*	-0.013	-0.070
	(0.174)	(0.144)	(0.078)	(0.058)	(0.076)	(0.055)	(0.119)
Georgia	0.797*	-0.053	-0.054	-0.057	-0.081	-0.100	0.152
	(0.335)	(0.209)	(0.095)	(0.061)	(0.081)	(0.169)	(0.238)
Hong Kong	0.093	0.072	0.001	0.069*	-0.011	0.022	-0.032
	(0.090)	(0.188)	(0.049)	(0.030)	(0.039)	(0.054)	(0.086)
Hungary	0.141	-0.277	-0.185	0.043	0.070	-0.089	-0.137
	(0.160)	(0.217)	(0.168)	(0.029)	(0.044)	(0.070)	(0.070)
Indonesia	0.259	-0.416*	0.009	-0.022	0.282*	0.051	-0.306*
	(0.178)	(0.166)	(0.044)	(0.042)	(0.088)	(0.065)	(0.128)
Iran	0.151	-0.312	0.040	-0.003	0.064	0.084	-0.281
	(0.206)	(0.208)	(0.037)	(0.031)	(0.064)	(0.080)	(0.149)
Italy	0.250	0.003	-0.142	0.085	-0.103	-0.053	-0.250
	(0.254)	(0.239)	(0.097)	(0.058)	(0.071)	(0.088)	(0.175)
Japan	0.597*	0.176	-0.601	0.049	0.050	0.037	-0.269*
	(0.205)	(0.230)	(0.328)	(0.040)	(0.037)	(0.053)	(0.122)
Jordan	0.117	-0.066	-0.138	-0.034	0.087	0.018	0.081
	(0.117)	(0.154)	(0.108)	(0.039)	(0.073)	(0.050)	(0.119)
Korea	0.525*	-0.406	0.074	0.026	-0.066	0.234*	0.002
	(0.146)	(0.346)	(0.306)	(0.071)	(0.054)	(0.086)	(0.172)
Kazakhstan	0.053	-0.315	0.290	-0.037	-0.105	-0.160	-0.228
	(0.414)	(0.304)	(0.193)	(0.066)	(0.123)	(0.179)	(0.273)
Lebanon	-0.024	-0.383	0.216	0.085	0.106	-0.196*	-0.134
	(0.194)	(0.245)	(0.132)	(0.084)	(0.083)	(0.076)	(0.169)
Lithuania	-0.056	0.429*	-0.108	0.000	-0.134	0.014	0.116
	(0.292)	(0.205)	(0.164)	(0.066)	(0.088)	(0.112)	(0.209)

Macedonia	-0.231	0.001	-0.060	0.056	-0.112	0.110	0.047
	(0.344)	(0.243)	(0.123)	(0.066)	(0.094)	(0.085)	(0.147)
Malaysia	0.159	-0.112	0.001	0.034	0.010	0.092	-0.423*
	(0.112)	(0.145)	(0.046)	(0.044)	(0.053)	(0.055)	(0.132)
Morocco	0.138	-0.114	0.051	0.012	0.022	-0.062	-0.201
	(0.159)	(0.112)	(0.037)	(0.031)	(0.053)	(0.045)	(0.157)
Norway	-0.310	-0.082	-0.198	0.066	-0.111	0.062	0.157
	(0.291)	(0.220)	(0.122)	(0.092)	(0.090)	(0.102)	(0.167)
New Zealand	0.381*	-0.198	0.138	0.068	0.059	-0.011	0.117
	(0.079)	(0.134)	(0.092)	(0.045)	(0.033)	(0.044)	(0.084)
Oman	-0.070	-0.121	0.021	0.019	-0.015	0.068	-0.019
	(0.059)	(0.116)	(0.029)	(0.028)	(0.048)	(0.035)	(0.077)
Palestine	-0.258	0.213	0.015	-0.050	-0.060	-0.009	0.025
	(0.153)	(0.148)	(0.095)	(0.033)	(0.066)	(0.056)	(0.118)
Qatar	-0.020	0.009	-0.054	0.020	-0.074	0.012	0.209
	(0.101)	(0.204)	(0.063)	(0.058)	(0.093)	(0.076)	(0.108)
Romania	-0.004	0.089	0.384	0.031	0.022	0.066	-0.082
	(0.203)	(0.235)	(0.301)	(0.043)	(0.055)	(0.056)	(0.131)
Russia	-0.192	-0.666*	0.037	-0.006	-0.017	0.037	-0.084
	(0.253)	(0.240)	(0.088)	(0.057)	(0.056)	(0.068)	(0.130)
Saudi Arabia	0.000	-0.117	-0.028	0.029	0.131	-0.060	-0.341
	(0.000)	(0.294)	(0.091)	(0.067)	(0.123)	(0.076)	(0.196)
Singapore	0.147*	0.009	-0.029	0.037	-0.015	-0.001	-0.006
	(0.060)	(0.122)	(0.050)	(0.040)	(0.031)	(0.041)	(0.081)
Slovenia	0.079	0.261	-0.063	0.031	-0.109*	0.056	0.041
	(0.213)	(0.169)	(0.043)	(0.055)	(0.053)	(0.062)	(0.111)
Sweden	-0.310	-0.252	-0.223	0.103	-0.037	-0.008	-0.050
	(0.273)	(0.331)	(0.165)	(0.065)	(0.072)	(0.075)	(0.173)
Syria	0.116	0.129	0.237*	0.061*	-0.007	-0.109	-0.234
	(0.100)	(0.158)	(0.106)	(0.024)	(0.075)	(0.062)	(0.155)
Thailand	0.412*	-0.310	0.022	0.025	0.107	-0.025	-0.273*
	(0.106)	(0.202)	(0.025)	(0.029)	(0.063)	(0.044)	(0.100)
Tunisia	0.265	0.050	0.105	-0.051	0.081	-0.002	-0.192
	(0.182)	(0.168)	(0.096)	(0.035)	(0.074)	(0.059)	(0.146)
Turkey	0.194	0.291*	-0.011	0.006	-0.126*	-0.070	-0.009
	(0.151)	(0.110)	(0.062)	(0.034)	(0.053)	(0.049)	(0.084)
Taiwan	0.457*	-0.242	0.179	0.005	-0.065	-0.007	-0.026
	(0.195)	(0.317)	(0.117)	(0.078)	(0.062)	(0.062)	(0.160)
UAE	-0.055	-0.103	-0.013	-0.004	0.048*	-0.027	0.052
	(0.048)	(0.088)	(0.022)	(0.022)	(0.023)	(0.031)	(0.048)
Ukraine	-0.399	0.034	-0.054	-0.086	-0.204*	0.153	-0.312
	(0.271)	(0.359)	(0.058)	(0.097)	(0.101)	(0.115)	(0.221)
USA	0.229*	0.131	0.086	0.057	0.094*	-0.010	0.020
	(0.110)	(0.092)	(0.073)	(0.030)	(0.033)	(0.036)	(0.068)

Note. *$p < .05$.

Table 7

Between-School Variance in Poisson Intercept

Country	EST (SE)	Country	EST (SE)
Armenia	0.131* (0.040)	Morocco	0.027* (0.006)
Australia	0.028* (0.005)	Norway	0.047* (0.012)
Bahrain	0.009* (0.003)	New Zealand	0.016* (0.003)
Chile	0.040* (0.008)	Oman	0.027* (0.005)
England	0.025* (0.007)	Palestine	0.035* (0.008)
Finland	0.025* (0.008)	Qatar	0.037* (0.008)
Ghana	0.041* (0.018)	Romania	0.028* (0.010)
Georgia	0.048* (0.017)	Russia	0.046* (0.012)
Hong Kong	0.019* (0.004)	Saudi Arabia	0.090 (0.065)
Hungary	0.020* (0.005)	Singapore	0.011* (0.002)
Indonesia	0.028* (0.005)	Slovenia	0.032* (0.006)
Iran	0.064* (0.020)	Sweden	0.028* (0.008)
Italy	0.067* (0.015)	Syria	0.035* (0.009)
Japan	0.021* (0.005)	Thailand	0.011* (0.003)
Jordan	0.031* (0.009)	Tunisia	0.052* (0.010)
Korea	0.026* (0.006)	Turkey	0.032* (0.005)
Kazakhstan	0.095* (0.045)	Taiwan	0.038* (0.012)
Lebanon	0.099* (0.017)	UAE	0.028* (0.004)
Lithuania	0.035* (0.012)	Ukraine	0.071* (0.021)
Macedonia	0.044* (0.011)	USA	0.026* (0.005)
Malaysia	0.036* (0.008)		

Note. *$p < .05$.

Appendix A

List of Independent Variables at Level-One and Level-Two

Level 1		Level 2	
Variable	Short Name	Variable	Short Name
Support	SUPP		MSUPP*
Achievement	ACH		MACH*
Age	AGE		MAGE*
Sex	MALE		MMALE*
Self Esteem	SLFEST		MSLFEST*
Language Spoken at Home	LANG		MLANG*
Student-Teacher Relations	TEAREL		MTEAREL*
Parental Involvement	PINV		MPINV*
Attachment	SATCH		MSATCH*
Socioeconomic Status	SES		MSES*
Child of Immigrant	CHIMM		
Foreign Born	FGNBOR		
Age of Immigration	AGEIMM		
		School Size	SCHSIZE
		Urbanicity	URBAN
		Discipline Policy	DISPOL
		Attachment	ATCH
		Parental Involvement	PINV

Note. *Aggregated school-level average of level-one variable.

Figure 1. Normal density over histogram of violence scale distribution