

## School Order, Justice, and Education: Climate, Discipline Practices, and Dropping Out

Anthony A. Peguero  
*Virginia Tech*

Nicole L. Bracy  
*Harder+Company Community Research*

There is a growing body of research that explores how school climate, order, and procedural justice are related to violence within American public schools. What remains in the background, however, is how school climate, order, and justice are related to aspects of education such as dropping out. This study uses multilevel analysis, drawing from the Educational Longitudinal Study of 2002, to examine the effect of school climate, order, and justice on dropping out. Results indicate that, when considering the various dimensions of school climate, order, and justice, a student receiving a formal school sanction remains the strongest factor related to the likelihood of a student dropping out of school. These results underscore the importance of careful design and implementation of school discipline and safety policies.

Dropping out of high school is related to a number of negative outcomes. At the individual level, those who fail to complete school have poorer general health over the life span and are more likely to be unemployed, more likely to be delinquent and use drugs, and more likely to be incarcerated than their high school graduate counterparts (Cataldi, Laird, & KewalRamani, 2009; Kozol, 1991; Rumberger, 2011). At the structural level, high school dropouts are costly to the U.S. national economy via unemployment, public healthcare expenses, and diminished tax contributions (Alexander, Entwisle, & Kabbani, 2001; Rumberger, 2011; Tyler & Lofstrom, 2009).

Across a number of theories (e.g., social learning, social control, general strain, social disorganization, and life course), schools are avenues for learning, bonding, strain, access to educational and economic opportunities, and a potential turning point that can influence adolescents' risk for adult criminality (Eccles & Roeser, 2011; Kozol, 1991). School climate, which can be understood as a sum of the experiences, norms, values, relationships, practices, and structures of a school, is a manipulatable school-level factor that shapes school experiences for students and teachers alike (Cohen & Geier, 2010; National School Climate Council, 2007). Recent research has demonstrated that a positive school climate helps to address problems of violence, victimization, aggressive behavior, and bullying (Gottfredson, Gottfredson, Payne, & Gottfredson, 2005; LeBlanc, Swisher, Vitaro, & Tremblay, 2008; Lo et al., 2011; Payne, 2008; Payne, Gottfredson, & Gottfredson, 2003; Roques & Pateronster, 2011; Tillyer, Wilcox, & Gialopsos, 2010; Wang & Dishion, 2012).

Relevant to the issue of school dropout, positive school climate has also been associated with academic achievement and increased graduation rates (Cohen & Geier, 2010; Devine & Cohen, 2007). However, an important question has yet to be answered: What are the most salient components of school climate that are associated with whether a student drops out or graduates? This study seeks to address this question by examining how five specific aspects of school climate—school security, discipline, disorder, procedural justice, and student–teacher relationships—are independently linked to a student's likelihood of dropping out of school. This research draws on data from the 2002 Educational Longitudinal Study (ELS), a nationally stratified sample of tenth-grade public high school students, and incorporates multilevel analyses to examine how these elements of school climate aggravate or mitigate high school dropout.

**SCHOOL CLIMATE**

Schools are primary agents of socialization; after one's own family, the school is often the first place a child learns society's norms, values, and culture and comes to understand his or her roles and responsibilities in society (Eccles & Roeser, 2011;

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Requests for reprints should be sent to Anthony A. Peguero, Department of Sociology, Center for Peace Studies and Violence Prevention, Virginia Tech, Blacksburg, VA 24061.  
E-mail: anthony.peguero@vt.edu

Kozol, 1991; Roeser, Eccles, & Sameroff, 2000; Wang & Dishion, 2012). Dewey (1916) first called attention to the link between education and democracy, arguing that public schools could level the playing field between the advantaged and the less advantaged and serve as apprenticeship for civic life. Since Dewey's seminal work, researchers have scrutinized the socialization processes that occur in schools, recognizing the long-lasting and far-reaching impact schools may have.

Even before Dewey, educators and scholars attempted to understand the quality of school environments. However, it was not until the 1950s that school climate emerged as a systematic area of study (Center for Social and Emotional Education, 2009). Although school climate is a broad concept with many components, it is commonly characterized as "shared beliefs, values, and attitudes that shape interactions between students, teachers, and administrators and set the parameters of acceptable behavior and norms for the school" (Koth, Bradshaw, & Leaf, 2008, p. 96). Benefits of a healthy school climate include cooperative learning, youth development, academic achievement, respect, and mutual trust (Ghaith, 2003).

Cohen and Geier (2010) identified four domains of school climate most commonly referenced in the literature:

Virtually all researchers suggest that there are four essential areas of focus: Safety (e.g., rules and norms; physical safety; social-emotional safety); Relationships (e.g. respect for diversity; school connectedness-engagement; social support—adults; social support—students; leadership); Teaching and Learning (e.g., social, emotional, ethical and civic learning; support for learning; professional relationships); and the Institutional Environment (e.g., physical surrounding). (p. 1)

While operationalization of these domains varies by study, and not every study assesses each of these school climate domains, researchers argue that school climate is related to education, including academic performance and achievement, student adjustment, student behavior, absenteeism, and rate of suspension (MacNeil, Prater, & Busch, 2009; Rumberger, 2011; Wang & Dishion, 2012).

Few studies, however, have examined multiple domains of school climate in relation to school dropout. In a study of Canadian high school students, Archambault, Janosz, Morizot, and Pagani (2009) found that students who reported low

engagement in school or decreases in investment in school over time were significantly at risk of dropping out. Using earlier waves of the National Center for Education Statistics (NCES) data, DeLuca and Rosenbaum (2001) examined the effects of three specific elements of school climate (i.e., peer threats, social isolation, and teacher disengagement) on dropout. Their findings suggest that students who reported being derogated by their teachers were likely to drop out of school. Thus, given the state of contemporary school policies and practices, and to advance the literature on the impact of school climate on students' education, this study seeks to examine five dimensions of school climate in relation to dropout, which span these four school climate domains. These dimensions include *school security* (maps to institutional environment), *school discipline* (maps to relationships), *student perceptions of school disorder* (maps to safety), *procedural justice* (maps to teaching and learning), and *student-teacher relationships* (maps to relationships). Results will speak to which aspects of school climate are most salient, where schools might focus their efforts toward balancing these four aspects of school climate.

### School Security

Over the past two decades, school security and disciplinary measures have increased in school districts, despite overall declines in school violence nationally (Henry, 2009; Kupchik, 2010; Muschert & Peguero, 2010). Today's public schools employ a variety of security measures, such as School Resource Officers, security guards, surveillance cameras, metal detectors, and random searches of students and lockers to control school buildings (and the students within them), all of which convey a serious crackdown on violence (Bracy, 2010; Kupchik, 2010; Muschert & Peguero, 2010). Some scholars posit that highly publicized incidents of mass homicide, such as the 1999 school shootings at Columbine High School, further motivated an already growing trend of surveillance and security (Henry, 2009; Muschert & Peguero, 2010). During the 1999–2000 school year, for example, approximately 19% of public schools used security cameras to monitor the schoolyard; by 2009–2010, 61% of schools used security cameras (Robers, Zhang, & Truman, 2012).

Perceived school safety is important for student learning (Devine & Cohen, 2007); however, criticism has emerged in educational, sociological, criminological, and legal studies (and to some

degree in public discourse) that schools may be going too far in attempting to promote safety, unintentionally causing harm to students in the process (Kim, Losen, & Hewitt, 2010; Noguera, 2008; Rios, 2011; Roques & Paternoster, 2011). High levels of school security have not proven to reduce school violence (Peguero, Popp, & Koo, 2011; Schreck, Miller, & Gibson, 2003; Wilcox, Tillyer, & Fisher, 2009) and, instead, can negatively affect students by increasing the likelihood they will have contact with the criminal justice system (Kupchik, 2010; LeBlanc et al., 2008; Lo et al., 2011; Rios, 2011; Wang & Dishion, 2012). In addition to putting students at increased risk for arrest, high levels of school security can also be counterproductive to school climate by instilling fear in students, breeding mistrust between students and staff, adversely shaping students' perceptions of justice, and inspiring a culture of mass incarceration by socializing students to accept constant surveillance and control as normal (Bracy, 2010; Kupchik, 2010; Portillos, González, & Peguero, 2012; Rios, 2011).

School security has not typically been included as a component of school climate in research literature, although it fits well within the institutional environment domain of school climate described above. Considering the proliferation of security measures in contemporary public schools and the potential for excessive or inappropriately implemented security measures which can negatively affect school climate, we argue that school security is an important component to include when examining dropping out. We hypothesize that increased school security will contribute to a greater likelihood of dropping out.

### School Discipline

In response to the potential threat of violence, some schools in the United States have embraced exclusionary forms of punishment—those that keep misbehaving students out of the classroom (such as with in-school suspension) or out of the school altogether (such as with out-of-school suspension or expulsion). Partially, as a consequence of the zero-tolerance policies that prescribe these kinds of punishments, suspensions and expulsions have exponentially increased (Hirschfield, 2008; Hirschfield & Celinska, 2011; Kupchik, 2010; Skiba, Horner, Chung, & Rausch, 2011). While school discipline intends to protect students and remediate misbehavior, research has revealed serious unintended consequences of formal school disciplinary sanctions.

Being a recipient of school discipline may actually set students on a path toward educational disengagement and failure (Hirschfield, 2008; Hirschfield & Celinska, 2011; Kupchik, 2010; Noguera, 2008; Rios, 2011; Skiba et al., 2011). Disciplined students often do not view education as a viable process or means for success and are more likely to drop out of high school and discontinue their education altogether (Kupchik, 2010; Noguera, 2008; Rios, 2011). As a consequence of being disconnected from legitimate paths to success, school-disciplined adolescents are also more likely to engage in delinquency, drug use, and adult criminality (Hirschfield, 2008; Hirschfield & Celinska, 2011; Skiba et al., 2011). While existing research suggests a link between school discipline and dropout, the current study tests whether experiencing school discipline is associated with dropping out net of other dimensions of school climate, while controlling for key demographic factors. We hypothesize that students who have experienced school discipline will be more likely to drop out than students who have not experienced school discipline.

### Perceptions of School Disorder

As schools are formative institutions where youth spend a significant portion of their day, it is reasonable to expect they are safe, welcoming places for students. The perception of disorderly schools can negatively affect students' school experiences, behaviors, and interactions. Dimensions of disorder, such as not feeling safe, learning disruptions, the presence of gangs in school, and racial and ethnic group tensions, have been found to be associated with increased school misbehavior, delinquent behavior, depression, poor cognitive functioning, poor test scores, disengagement, detachment from school, and diminished academic motivation (Cornell & Mayer, 2010; LeBlanc et al., 2008; Lo et al., 2011; Nishina, Juvonen, & Witkow, 2005; Wang & Dishion, 2012). Conversely, when students perceive their schools to be orderly, this can be beneficial for self-esteem, prosocial behavior, school bonds, educational progress, and success (Cornell & Mayer, 2010; LeBlanc et al., 2008; Lo et al., 2011; Nishina et al., 2005; Wang & Dishion, 2012). Based on earlier research demonstrating the importance of student perceptions of school disorder, it is reasonable to test whether these perceptions are linked to a student's likelihood of dropping out of school. We hypothesize that the more school disorder a student perceives, the more likely he or she will drop out of school.

### Perceptions of Procedural Justice

Procedural justice refers to fairness in the formal and informal processes of resolving disputes (Blader & Tyler, 2003). The importance of procedural justice has been demonstrated in a variety of contexts, including those involving police contact with community members (Tyler & Huo, 2002), courts of law (Casper, Tyler, & Fisher, 1988; Ramirez, 2008), and work environments (Tyler & Blader, 2000). For example, when people believe a law is legitimate, they are more likely to obey (Tyler, 1990). Similarly, when people feel they have been treated fairly by an authority, they are more likely to comply with the authority's decisions, even when they disagree with the decision (Sunshine & Tyler, 2003).

When applied to students and schools, procedural justice generally refers to student beliefs about the fairness of school rules and application of discipline practices (see, e.g., Hagan, Shedd, & Payne, 2005; Kupchik, 2010; Kupchik & Ellis, 2008; Muschert & Peguero, 2010; Peguero, 2012; Portillos et al., 2012; Rios, 2011). Adolescents who perceive school rules and discipline practices as just and fair have improved interpersonal relationships with teachers and administrators, strong bonds to their school and education, increased perceptions of school safety and educational achievement, and decreased school misbehavior (Hong & Eamon, 2012; Payne, 2008; Payne et al., 2003). Conversely, students who perceive the school rules and discipline practices as unjust or unfair have weakened bonds to school and their own education, poorer educational progress, and more school misbehavior (Kupchik, 2010; Payne, 2008; Payne et al., 2003; Portillos et al., 2012; Rios, 2011). Therefore, we hypothesize that students who have high perceptions of procedural justice in their schools will be less likely to drop out of school.

### Perception of Student–Teacher Relationships

School teachers serve as mentors, role models, sources of encouragement and support, and representatives of the educational system. Therefore, students' relationships with teachers can shape students' behavior in school as well as influence their educational progress and success. Research consistently reveals that adolescents who report healthy and strong relationships with their teachers show improved educational achievement, motivation, cognitive, emotional, and social development, prosocial behavior, and self-esteem (Crosnoe,

Johnson, & Elder, 2004; Davis & Dupper, 2004; Hamre, Pianta, Downer, & Mashburn, 2008; Peguero & Bondy, 2011). Likewise, adolescents who perceive their relationships with teachers as poor demonstrate diminished social, emotional, and behavioral responses to their education.

While positive student–teacher relationships can benefit students, certain characteristics of contemporary schools may function as barriers to the development of these relationships. Research in this area suggests that increased social control securitization in schools can create adversarial relationships between students and teachers, whereby teachers are viewed by students as agents of rule enforcement rather than educational nurturers and caregivers (Kupchik, 2010; Portillos et al., 2012; Rios, 2011). While some studies have found strong student–teacher relationships function as protective factors against school dropout (e.g., Davis & Dupper, 2004), this study will consider the effect of student–teacher relationships on school dropout, net of other aspects of school climate. We hypothesize that students with positive ratings of student–teacher relationships will be less likely to drop out of school.

### This Study

While school climate has been suggested as important for students and staff in promoting positive school experiences, there has been less research investigating the specific aspects of school climate that are associated with dropout. This study examines student perceptions of five key dimensions of school climate: security, discipline, disorder, procedural justice, and student–teacher relationships, controlling for a number of student, family, and school variables. These five dimensions were tested for their independent associations with students' likelihood of dropping out of school. We hypothesized that security, discipline, and disorder will function as risk factors for school dropout, while positive perceptions of procedural justice and student–teacher relationships will function as protective factors against dropout.

## METHOD

### Data and Sample

Data reported in this study are drawn from the Educational Longitudinal Study of 2002 (ELS). The Educational Longitudinal Study is a longitudinal, multilevel study administered by the Research



Triangle Institute (RTI) for the National Center for Education Statistics (NCES) of the U.S. Department of Education. The Educational Longitudinal Study was designed to monitor the transition of a national sample of adolescents as they progress from 10th grade through high school and on to postsecondary education or the workforce. Surveys were administered to students, parents, teachers, and school administrators in 2002, 2004, and 2006 and include questions about their experiences and backgrounds, as well as about the characteristics of the sampled schools. This study focused on 12,030 public school students who were part of the base year ELS sample. Attrition and the omission of key variables required for the analysis led to the exclusion of an additional 230 cases. A final subsample of 11,800 students in 580 public schools is used in these analyses.

### Dependent Variable

**Dropping out.** The dependent variable in this study is dropping out of school (dichotomized as 1 = *yes* and 0 = *no*). Research on dropping out confronts a multitude of theoretical and methodological issues. At the center of the debates is a disagreement about how to define and measure dropping out (for a review, see Entwisle, Alexander, & Olson, 2004). School systems often define dropout differently, affecting how rates of completion are calculated. Challenges arise when investigators must distinguish between adolescents who never complete high school and those who may have dropped out but then return to school or pursue their graduate equivalent degree (G.E.D.). Even though some students who have dropped out of school decide to pursue a G.E.D., there is a general consensus that a G.E.D. is not equivalent to a high school diploma as G.E.D. holders more closely resemble high school dropouts than high school graduates (Entwisle et al., 2004).

For the purposes of this study, dropping out (1 = *yes*) is indicated if a student was no longer enrolled in school by the third wave (i.e., second follow-up) of the study that occurred in 2006–2007, approximately 4 years after the first wave. NCES researchers constructed a variable defined as “ever dropout” in the third wave of the study, capturing whether a student has ever dropped out since the initial 10th-grade survey. Using this third wave of data as the follow-up year provides the most reliable information regarding whether a student “ever” dropped out of high school, because the first follow-up that occurred 2 years later may not have cap-

tured all students who may have eventually dropped out. As noted in prior research (Alexander et al., 2001; Entwisle et al., 2004; Rumberger, 2011), the event of dropping out of school, regardless of whether the student returned after some time or earned a G.E.D., has long-term detrimental educational, social, and economic consequences. For the purposes of this study, we specifically investigate whether school climate is linked to the event of dropping out and not if the student remained a “dropout” or did not earn a G.E.D. or return to high school.

### Independent Variables

**School security.** A school security index (ranging from 0 to 7,  $\alpha = .72$ ) was constructed by counting the number of distinct security measures that administrators indicated are used in their schools: (1) controlled access (control access to school buildings during school hours; control access to school grounds during school hours; or close the campus for most students during lunch), (2) metal detectors (require students to pass through metal detectors each day or perform one or more random metal detector checks on students), (3) drug searches (use one or more random dog sniffs to check for drugs, or perform one or more random sweeps for contraband), (4) identification badges (require students to wear badges or picture IDs, or require faculty and staff to wear badges or picture IDs), (5) paid law enforcement (paid law enforcement or security services during school hours; while students were arriving to school; or for selected school activities [e.g., athletic and social events, open houses, and science fairs]), (6) require clear book bags or ban book bags on school grounds, and (7) use one or more security cameras to monitor the school. On this 7-point scale of school security, schools on average have three to four security measures implemented.

**School discipline.** Students were asked how often they have received any of three forms of school discipline during the 2001–2002 academic year (0 = *never*, 1 = 1–2 *times*, 2 = 3–6 *times*, 3 = 7–9 *times*, and 4 = 10 or more *times*): (1) in-school suspension, (2) suspension or probation, or (3) transferred to another school for disciplinary reasons. Because the results were skewed with a mean of 3 on a 15-point scale, a dichotomous school discipline variable was created where 1 indicates having received some form of school discipline and 0 indicates not receiving a form of school discipline during the year.

**Perception of school disorder.** A school disorder scale (ranging from 0 to 12,  $\alpha = .69$ ) was constructed using responses from the student survey. Adolescents were asked about their perceptions of school disorder during the 2001–2002 academic year. Similar to previous studies (Gottfredson et al., 2005; Wilcox, Campbell Augustine, Bryan, & Roberts, 2005), perception of school disorder is based on four Likert scale items (ranging from 0 = *strongly disagree* to 3 = *strongly agree*): (1) I don't feel safe at this school, (2) disruptions by other students get in the way of my learning, (3) there are gangs in school, and (4) fights often occur between different racial and ethnic groups.

**Perception of procedural justice.** A procedural justice scale (ranging from 0 to 15,  $\alpha = .84$ ) was constructed using the student survey. Similar to previous studies (Hagan et al., 2005; Kupchik & Ellis, 2008; Peguero, 2012), perception of procedural justice is based on five Likert scale items (ranging from 0 = *strongly disagree* to 3 = *strongly agree*): (1) Everyone knows what the school rules are; (2) if a school rule is broken, students know what kind of punishment will follow; (3) the school rules are fair; (4) school rules are strictly enforced; and (5) the punishment for breaking school rules is the same no matter who you are.

**Perception of student–teacher relationships.** A student–teacher relationship scale (ranging from 0 to 12,  $\alpha = .75$ ) was constructed using the student survey. Similar to previous studies (Peguero & Bondy, 2011), perception of student–teacher relationship is based on four Likert scale items (ranging from 0 = *strongly disagree* to 3 = *strongly agree*): (1) Students get along with teachers, (2) teachers are interested in students, (3) teachers praise my effort, and (4) I don't feel “put down” by teachers.

### Control Variables

Previous studies have established that a number of student, family, and school characteristics are associated with students' perceptions of their school climate (Bracy, 2011; Cataldi et al., 2009; Entwisle et al., 2004; Hagan et al., 2005; Hong & Eamon, 2012; Kupchik, 2010; Rumberger, 2011; Skiba et al., 2011). Student characteristics captured in the ELS data sets include gender, educational achievement (i.e., test scores), school involvement, school misbehavior, race, and ethnicity. Available family characteristics include socioeconomic status, family structure, and family involvement. Available school

characteristics include level of social problems and disorder, proportion of racial and ethnic minorities in the school, proportion of students who receive free or reduced lunch, school size, and school locale. Each of these individual-, family-, and school-level characteristics is included as control variables in the regression analyses.

**Student characteristics.** Gender is coded as 1 = *male* and 0 = *female* based on the student's self-report, with females serving as the reference group. Educational achievement is measured using reading and math composite scores based on standardized tests developed by the Educational Testing Service (ETS). The composite scores are the averages of the math and reading standardized scores, restandardized to a national mean of 50.0 with a standard deviation of 10.0. The school misbehavior variable (0 = *never*, 1 = *once or twice*, and 2 = *more than twice*) measures whether the student is involved in any of the following misbehaving activities: (1) cutting and (2) fighting. The school involvement variable measures whether the student is involved in any of the following extracurricular activities: (1) academic (e.g., honor society, band, yearbook), (2) school clubs, (3) intramural sports, and (4) interscholastic sports.

Race and ethnicity is self-reported by the students. The sample for these analyses included African American, Latino American, Asian American, Native American, Multiracial American, and White American (recoded as the reference group). Racial and ethnic minority groups are oversampled in ELS to obtain a sufficient representation for statistical analyses. In turn, the sample weights used in these analyses are calculated by NCES to compensate for the sampling design and for nonresponse bias (see Ingels et al., 2007).

**Family characteristics.** The NCES measure of socioeconomic status is a standardized (z-score) variable based on five equally weighted components: father's or guardian's education, mother's or guardian's education, family income, father's or guardian's occupational prestige, and mother's or guardian's occupational prestige (see Ingels et al., 2007). Family structure is a dichotomous variable differentiating households in which there are two parents or guardians in the home, relative to single-parent or guardian homes that serve as the reference group. A family involvement index is created using students' responses to eight questions about whether their parents or guardians engage in a variety of school activities (e.g., checking home-

work, discussing school courses, and discussing college attendance).

**School characteristics.** The school's level of social disorder is measured using school administrators' responses to 19 questions that represent the amounts and types of social disorder within their school (0 = *never happens*; 4 = *happens daily*). Such measure includes tardiness, absenteeism, class cutting, physical conflicts, robbery or theft, vandalism, use of alcohol, use of illegal drugs, students under the influence of drugs or alcohol while at school, the sale of drugs in the schoolyard, possession of weapons, racial-ethnic tensions, student bullying, gang activities, physical abuse of teachers, verbal abuse of teachers, students' acts of disrespect toward teachers, gang activities, and undesirable cult or extremist group activities. School diversity is measured by the percentage of students who self-identify as racial and ethnic minorities. School poverty is measured by the proportion of students who receive free or reduced-price lunches. School size is measured by total student enrollment. School locale represents whether the school is located in an urban, rural, or suburban (reference category) locale.

**Analysis.** As the ELS consists of a cluster sample in which schools are sampled with unequal probability and then students are sampled or "nested" within these selected schools, the subsample of the ELS utilized in this study violates the assumption of independent observations. The nested structure of the ELS (i.e., students within schools) makes multilevel modeling an appropriate analytic tool (Raudenbush, Bryk, & Congdon, 2008). Furthermore, because the dependent variable *dropping out* is dichotomous, hierarchical generalized linear model (HGLM) is employed to analyze the multilevel relationships between students' perceptions of school climate and their likelihood of dropping out.

All Level 1 (student) and Level 2 (school) variables have been centered on their group means. This allows us to examine the probability of dropping out within each school. We can therefore interpret the grand intercept as the probability that the average student will drop out within each school, while controlling for other pertinent student and school factors. The statistical models used in this study take into account that individuals within a particular school may be more similar to one another than individuals in another school and, therefore, may not provide independent observations.

The analyses proceed in several steps. Table 1 presents descriptive information for the variables in

this study. Tables 2, 3, and 4 display the results of the HGLM analyses showing the relationships between and effects of student perceptions of school climate, relevant student-, family-, and school-level characteristics, and dropping out. In the baseline model of Table 2, dropping out is regressed on student, family, and school characteristics. To assess the unique effects of school security, discipline, disorder, procedural justice, and student-teacher relationships on dropping out, these dimensions are added separately in Models 2, 3, 4, 5, and 6, respectively. In each model where a new independent variable is added, the other independent variables of interest are removed so that only one dimension of school climate is tested at a time. The exception is Model 7, shown in Table 4, which displays the complete and final model of the effects of the five tested dimensions of school climate on drop-out.

The Educational Longitudinal Study includes imputed values (via sequential hot-deck imputation) for certain key variables, including family socioeconomic status and educational achievement (Ingels et al., 2007). These imputed values are included in the presented analyses. In cases of missing data for

TABLE 1  
Descriptive Statistics for Study Variables

Variables	Range	M	SD
School discipline	0-1	.17	.37
Perception of school disorder	0-12	4.66	2.16
Procedural justice	0-15	8.18	2.98
Student-teacher relationships	0-12	7.31	1.90
Student characteristics			
Male	0-1	.49	.50
Educational achievement	21.56-79.85	49.48	9.92
School involvement	0-4	1.45	1.14
School misbehavior	0-6	.71	1.16
Race and ethnicity			
African American	0-1	.15	.35
Latino American	0-1	.16	.36
Asian American	0-1	.11	.31
Native American	0-1	.01	.10
Multiracial American	0-1	.05	.21
White American	0-1	.53	.50
Family characteristics			
Socioeconomic status	-2.11-1.98	-.082	.71
Structure	0-1	.75	.43
Involvement	0-8	5.03	2.79
School characteristics			
Security	0-7	3.47	1.34
Disorder	10-56	27.02	5.75
Diversity	0-100	36.86	31.59
Poverty	0-100	25.03	18.71
Size	52-4,630	1,410	839.52
Urban locale	0-1	.28	.45
Rural locale	0-1	.22	.42
Suburban locale	0-1	.50	.50

TABLE 2  
 Hierarchical Generalized Linear Model Effects (Standard Errors) and Odds Ratios for School Security, Discipline, Order, Justice, Student-Teacher Relationships, and Dropping Out

	Model 1		Model 2	
	$\beta$ (SE)	OR	$\beta$ (SE)	OR
Within schools				
School discipline	—	—	—	—
School disorder	—	—	—	—
Procedural justice	—	—	—	—
Student-teacher relationships	—	—	—	—
Student characteristics				
Male	.345 (.062)***	1.412	.345 (.062)***	1.412
Educational achievement	-.048 (.004)***	.952	-.048 (.004)***	.952
School involvement	-.334 (.031)***	.715	-.334 (.031)***	.715
School misbehavior	.382 (.024)***	1.466	.383 (.024)***	1.467
Race and ethnicity				
African American	.144 (.114)	1.155	.139 (.114)	1.149
Latino American	.060 (.130)	1.062	.059 (.130)	1.061
Asian American	.063 (.134)	1.065	.048 (.136)	1.049
Native American	.479 (.330)†	1.614	.483 (.331)†	1.621
Multiracial American	.173 (.160)	1.189	.171 (.160)	1.187
Family characteristics				
Socioeconomic status	-.465 (.061)***	.627	-.464 (.061)***	.628
Structure	-.168 (.069)**	.968	-.168 (.069)**	.844
Involvement	-.031 (.012)***	-.031	-.031 (.012)**	.968
Between schools				
Security	—	—	.038 (.029)†	1.039
Disorder	.065 (.029)*	1.067	.062 (.029)*	1.064
Diversity	-.001 (.001)	.999	-.001 (.001)	.999
Poverty	.019 (.002)***	1.020	.019 (.002)***	1.020
Size	.001 (.001)	1.001	.001 (.001)	1.001
Urban locale	.190 (.099)*	1.209	.194 (.099)*	1.215
Rural Locale	.218 (.114)*	1.244	.215 (.113)*	1.240
Intercept	-2.268 (.042)***		-2.269 (.042)***	
Random effects	Variance	$X^2$	Variance	$X^2$
	.341***	1051.093	.340***	1047.341

Note. The omitted categories are female, White Americans, one-parent or guardian family structures, and suburban schools.  
 $*p \leq .05$ ;  $**p \leq .01$ ;  $***p \leq .001$ ;  $†p \leq .1$ .

variables not imputed by ELS, this study utilized the “impute” command in Stata which organizes cases by patterns of missing data and then runs regressions to determine predicted values. This method is consistent with prior research that has utilized these and similar data. This study also weighted analyses to account for unequal probabilities of selection and to adjust for no response.

## RESULTS

### Descriptive Statistics

Descriptive statistics for all variables are presented in Table 1. At the school level, administrators reported having three to four school security measures on average. For students' experiences with school discipline, approximately 17% of the sample reported

having received at least one form of the three forms of school discipline listed on the student survey (in-school suspension, suspension or probation, and transferred to another school for disciplinary reasons). The average level of students' perception of school disorder was 4.66 on a 12-point scale in the sample. The average level of students' perception of procedural justice was 8.18 on a 15-point scale in the sample. The average level of students' perception of student-teacher relationships was 7.31 on a 12-point scale in the sample.

### Student, Family, and School Characteristics

Table 2 presents the results of the HGLM regression analyses. The baseline model tested the effects of student, family, and school characteristics on the likelihood of dropping out. Males, students who



TABLE 3  
 Hierarchical Generalized Linear Model Effects (Standard Errors) and Odds Ratios for School Security, Discipline, Order, Justice, Student-Teacher Relationships, and Dropping Out

	<i>Model 3</i>		<i>Model 4</i>	
	$\beta$ (SE)	OR	$\beta$ (SE)	OR
Within schools				
School discipline	.749 (.088)***	2.116	—	—
School disorder	—	—	.035 (.019)*	1.035
Procedural justice	—	—	—	—
Student-teacher relationships	—	—	—	—
Student characteristics				
Male	.302 (.063)***	1.352	.345 (.062)***	1.413
Educational achievement	-.044 (.004)***	.956	-.047 (.004)***	.953
School involvement	-.327 (.031)***	.720	-.335 (.031)***	.715
School misbehavior	.289 (.025)***	1.335	.376 (.024)***	1.457
Race and ethnicity				
African American	.061 (.116)	1.063	.158 (.115)†	1.171
Latino American	.031 (.131)	1.031	.060 (.130)	1.062
Asian American	.051 (.136)	1.053	.056 (.134)	1.057
Native American	.398 (.318)	1.489	.471 (.328)†	1.602
Multiracial American	.160 (.162)	1.173	.165 (.161)	1.179
Family characteristics				
Socioeconomic status	-.464 (.061)***	.628	-.464 (.061)***	.628
Structure	-.144 (.069)**	.865	-.170 (.069)**	.843
Involvement	-.029 (.012)**	.971	-.031 (.012)**	.968
Between schools				
Security	—	—	—	—
Disorder	.063 (.029)*	1.065	.065 (.029)*	1.067
Diversity	.001 (.001)	1.001	.001 (.001)	1.001
Poverty	.019 (.002)***	1.020	.019 (.002)***	1.020
Size	.001 (.001)	1.001	.001 (.001)	1.001
Urban locale	.194 (.099)*	1.214	.191 (.099)*	1.210
Rural locale	.218 (.114)*	1.243	.215 (.114)*	1.240
Intercept	-2.294(.043)***		-2.270 (.042)***	
Random effects	Variance	$\chi^2$	Variance	$\chi^2$
	.340***	1048.232	.342***	1051.17331

Note. The omitted categories are female, White Americans, one-parent or guardian family structures, and suburban schools.  
 \* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ ; † $p \leq .1$ .

engage in school misbehavior, and students from single-parent families had higher odds of dropping out. Higher educational achievement and school involvement reduced students' likelihood of dropping out of school. Higher levels of family socioeconomic status and greater family involvement also reduced the likelihood of dropping out. These relationships remained consistent throughout each of the models in this analysis.

Of the school-level characteristics, disorder, poverty, and locale were related to students' likelihood of dropping out. Increases in school social disorder and school poverty were both associated with greater likelihoods of student dropout. Students in urban and rural schools were more likely to drop out in comparison with those in suburban schools. These relationships between school characteristics

and dropout remained consistent throughout each of the models in this analysis.

### School Disorder, Procedural Justice, and Education

In Model 2 displayed in Table 2, school security was added to the analysis while controlling for student, family, and school characteristics. Results indicated that as school security increased, the likelihood of students dropping out also increased ( $\beta = 1.111$ ,  $p \leq .001$ ).

In Model 3 displayed in Table 3, school security was removed from the analysis and school discipline was added, while controlling for student, family, and school characteristics. Students who received an official form of school discipline were

TABLE 4

Hierarchical Generalized Linear Model Effects (Standard Errors) and Odds Ratios for School Security, Discipline, Order, Justice, Student–Teacher Relationships, and Dropping Out

	Model 5		Model 6		Model 7	
	$\beta$ (SE)	OR	$\beta$ (SE)	OR	$\beta$ (SE)	OR
Within schools						
School discipline	—	—	—	—	.749 (.087)***	2.116
School disorder	—	—	—	—	.026 (.019)†	1.026
Procedural justice	-.020 (.011)*	.979	—	—	-.009 (.013)	.990
Student–teacher relationships	—	—	-.054 (.017)***	.946	-.042 (.021)*	.958
Student characteristics						
Male	.336 (.062)***	1.399	.343 (.062)***	1.410	.297 (.063)***	1.346
Educational achievement	.048 (.004)***	.952	-.047 (.004)***	.953	-.043 (.004)***	.957
School involvement	-.328 (.031)***	.719	-.326 (.031)***	.721	-.319 (.031)***	.726
School misbehavior	.377 (.025)***	1.458	.367 (.025)***	1.444	.271 (.026)***	1.312
Race and ethnicity						
African American	.146 (.114)	1.157	.150 (.114)	1.162	.074 (.117)	1.077
Latino American	.061 (.130)	1.063	.069 (.130)	1.072	.038 (.131)	1.039
Asian American	.067 (.134)	1.069	.075 (.133)	1.078	.042 (.137)	1.043
Native American	.478 (.332)†	1.613	.477 (.329)†	1.612	.400 (.316)	1.491
Multiracial American	.177 (.160)	1.194	.160 (.161)	1.173	.143 (.163)	1.154
Family characteristics						
Socioeconomic status	-.468 (.061)***	.625	-.472 (.061)***	.623	-.470 (.062)***	.624
Structure	-.169 (.069)**	.844	-.172 (.069)**	.841	-.148 (.069)*	.862
Involvement	-.031 (.012)**	.968	-.030 (.012)**	.969	-.028 (.012)*	.972
Between schools						
Security	—	—	—	—	.036 (.029)	1.037
Disorder	.065 (.029)*	1.067	.065 (.029)*	1.067	.061 (.029)*	1.063
Diversity	.001 (.001)	1.001	.001 (.001)	1.001	-.001 (.001)	.999
Poverty	.019 (.002)***	1.020	.019 (.002)***	1.019	.019 (.002)***	1.020
Size	.001 (.001)	1.001	.001 (.001)	1.001	.001 (.001)	1.001
Urban locale	.189 (.099)*	1.209	.190 (.099)*	1.210	.200 (.100)*	1.221
Rural locale	.219 (.114)*	1.244	.221 (.114)*	1.248	.215 (.114)*	1.240
Intercept	-2.270 (.042)***		-2.274 (.042)***		-2.301 (.043)***	
Random effects	Variance	$X^2$	Variance	$X^2$	Variance	$X^2$
	.343***	1053.157	.344***	1054.579	.345***	1049.230

Note. The omitted categories are female, White Americans, one-parent or guardian family structures, and suburban schools.

\* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ ; † $p \leq .1$ .

approximately two times more likely to drop out ( $\beta = .749$ ,  $p \leq .001$ ) than a student who had received no discipline.

In Model 4 displayed in Table 3, school discipline was removed from the analysis and perception of school disorder was added, while controlling for student, family, and school characteristics. As students' perceptions of school disorder increased, the likelihood of dropping out also increased ( $\beta = .035$ ,  $p \leq .05$ ).

In Model 5 displayed in Table 4, school disorder was removed from the analysis and perception of school procedural justice was added, while controlling for student, family, and school characteristics. As students' perceptions of school procedural justice improved, the likelihood of dropping out decreased ( $\beta = -.020$ ,  $p \leq .05$ ).

In Model 6 displayed in Table 4, perception of school procedural justice was removed from the analysis and perceptions of student–teacher relationship were added, while controlling for student, family, and school characteristics. As students' perceptions of student–teacher relationship improved, the likelihood of dropping out decreased ( $\beta = -.054$ ,  $p \leq .001$ ).

Table 4 displays the comprehensive model of all variables in the study (see Model 7). The results indicated that school discipline is a risk factor for dropping out of school. On the other hand, students' improved perceptions of student–teacher relationships had an insulating effect against dropping out of school. It is also important to note that in the final model, school security, school disorder, and students' perceptions of school procedural jus-

tice were no longer significantly ( $p \leq .05$ ) related to students' likelihood of dropping out.

## DISCUSSION

This study utilized longitudinal data from the Educational Longitudinal Study of 2002 to examine how students' perceptions of five dimensions of school climate—school security, discipline, disorder, procedural justice, and student–teacher relationships—are distinctively linked to the likelihood of dropping out of school. We hypothesized that security, discipline, and disorder would function as risk factors for school dropout, while positive perceptions of procedural justice and student–teacher relationship would function as protective factors against dropping out. Our results supported two of these hypotheses: Student perceptions of positive student–teacher relationships were a protective factor against dropout, and school discipline was a risk factor for dropout.

First, while controlling for other related variables, the results of this study reveal that having experienced school discipline was the strongest overall factor associated with dropping out. Students who have experienced at least one instance of school discipline were twice as likely to drop out as their counterparts who have never experienced school discipline. While school discipline is intended to correct undesirable behavior, these results suggest that it may instead be exacerbating it. This is particularly concerning given the amount of school discipline doled out in American public schools.

Also consistent with our hypothesis, student perceptions of positive student–teacher relationship were found to be a protective factor against dropout. This is consistent with prior research, which suggests healthy relationships between school administrators, teachers, and students positively influence the climate and effectiveness of school environments (Gottfredson et al., 2005; Payne, 2008; Payne et al., 2003). School personnel are instrumental in establishing a learning climate that fosters academic excellence and shapes the school's cultural attitude toward learning. In order for students to “buy into” these philosophies, they must trust, respect, and feel respected by their teachers and school administrators.

School disorder was found to be marginally significant ( $p \leq .10$ ) with dropping out, lending some credence to our hypothesis that disorder would be positively associated with school dropout. Further, the student perceptions of procedural justice index were not significant in the

final model, once all of the measured dimensions of school climate were present. Perceived fairness of school rules and punishments is the critical component of school climate (Bracy, 2011), but does not appear to be linked with dropping out, independent of other school climate dimensions.

Finally, school security was not significantly related to student dropout in any of the models. This finding was somewhat contrary to some research that suggests that an abundance of school security measures can alienate students (e.g., Mukherjee, 2007), leading to the expectation that high levels of school security would exacerbate dropout. However, considering that school security measures have been found to have little or no effect on reducing interpersonal violence within schools (Payne, 2008; Portillos et al., 2012; Schreck et al., 2003; Wilcox et al., 2009), the resources spent here may be better allocated to improving other aspects of school climate that are potential contributors to dropout.

## Contributions

This study contributes to a growing body of literature cautioning the potential of school discipline to derail students' educational progress (Kupchik, 2010; Rios, 2011; Skiba et al., 2011). Few studies have used a large and nationally representative sample of high school students to evaluate the unique impact of various dimensions of school climate with dropping out of high school. Findings from this study support and extend prior work in three ways. First, results suggest that a healthy school climate (i.e., increased perceptions of procedural justice and strong student–teacher relationships) is associated with educational progress, which reduced odds of dropping out. Second, this study also confirms that student-level misbehavior and school-level social problems and crime are correlated with educational failure, which increased odds of dropping out. Third, as suggested by prior research (Hirschfield & Celinska, 2011; Kim et al., 2010; Noguera, 2008; Rios, 2011), school discipline can also derail educational progress, which increased odds of dropping out. More importantly, however, our findings also suggest school discipline could minimize any positive relationship between a healthy school climate and educational success.

## Limitations and Future Research

Despite the strengths of this study, there are also several limitations, which are mostly due to the

ELS data set. First, these 2002–2006 data, while the most recent version at the time of this study, are somewhat dated. High school dropout rates declined slightly between 2002 and 2010 (National Center for Education Statistics, 2012); therefore, we may observe different trends if we examined more recent data. Further, research has documented that a number of students drop out or are held back between 9th and 10th grades—a phenomenon that has come to be known as “the ninth-grade bulge” (Wheelock & Miao, 2005). This phenomenon is not captured here as students are in 10th grade during the baseline year of the ELS.

The reliance on self-report data here may also be a potential limitation. On the one hand, self-report data may reflect a social desirability or recall bias particularly when it comes from students reporting on the frequency of their experience with school discipline. Obtaining and analyzing actual student disciplinary records would likely produce more valid results; however, that was not possible in this case. On the other hand, for three of the independent factors tested here (student–teacher relationships, school disorder, and procedural justice), students’ perceptions are the issue of interest, as it is their perceptions of these issues that are hypothesized to affect their engagement and attachment to school, which may consequently influence dropout. Thus, self-report methods are the optimal way to gather these data.

Another limitation of the ELS data is that the behaviors that led students to receive school discipline are not recorded, making it difficult to discern whether students who receive school discipline and later drop out are committing serious offenses, minor infractions, or both. It is possible, for example, that those who drop out have more severe behavior problems that explain their dropout, as opposed to their experiences with school discipline. That being said, even if these details about specific offenses were available in the ELS data, it would still be challenging to compare across schools. We would expect that each school has somewhat different thresholds regarding the specific behaviors that warrant various forms of school discipline. This would make it difficult to draw conclusions across schools about the specific forms of school discipline that are related to dropout. Despite these caveats, inasmuch as school discipline is intended to correct student misbehavior, it is falling short of this goal if, as we conclude here, students who receive discipline are instead *more* likely to drop out of school.

Another limitation of this study is that the presence or absence of zero-tolerance policies is not

indicated in the ELS data sets and so is not able to be considered here. Zero-tolerance policies have been cited elsewhere as contributors to school dropout and other negative student outcomes (Kupchik, 2010; Rios, 2011; Skiba et al., 2011), and, given the exclusionary nature of zero tolerance, the possibility that some of these students who are no longer in school by Wave 3 are not dropouts, but have been pushed out via zero tolerance, should not be overlooked.

Given the limitations described above, we encourage future research to examine the factors that contribute to dropout and include usage and perceptions of school zero-tolerance policies in that examination. Future research also ought to examine community-level characteristics, which are known to influence what happens within schools, but were not examined within the scope of the current study. For example, racial and ethnic community segregation, levels of community crime, and neighborhood poverty have been found to be associated with school disorder, school security, and school punishment practices and are also inextricably linked to individual student characteristics such as race, class, and gender (Rios, 2011; Skiba et al., 2011).

Considering that African American and Latino American males are disproportionately at risk for dropout in the United States (Cataldi et al., 2009; Rumberger, 2011), future research should consider the role that community-level variables play in shaping school climate and, consequently, in influencing *who* drops out at a disproportionate number. Again, dropping out is a serious problem because those who fail to complete school have poorer general health over the span of the life course and are more likely to be unemployed, delinquent, and incarcerated (Kim et al., 2010; Rios, 2011; Rumberger, 2011).

The current study primarily focused on dropping out as a single indicator of educational failure; however, future research should explore other indicators of educational progress and failure in relation to school order and justice. As noted throughout this study’s review of research, it is evident that adolescents’ perception of treatment in school, especially in relation to school procedural justice and discipline practices, can impact many aspects of educational progress, emotional or psychological well-being, and economic opportunities and trajectories. Exploring how school order, procedural justice, and discipline practices influence mental health outcomes, contact with the juvenile or criminal justice system, college attendance



and completion, and adult employment can certainly build on this study's correlational design.

### Implications for Policy and Practice

Given that having experienced school discipline was found to be the strongest factor associated with dropping out in this study, teachers, school administrators, educational policymakers, and stakeholders should reflect and evaluate whether discipline and the subsequent educational and social exclusion is the best policy to address misbehavior, disorder, and violence within schools. Of course, we do not discount the argued importance of disciplining adolescents who engage in deviant, delinquent, or violent behavior. However, Muschert and Peguero (2010) also argue, "the difficulty in understanding the catalysts for school antiviolence policy development is that the line between caring and undue control is unclear" (p. 123). It is evident that school administrators and personnel are under extreme scrutiny and pressure to ensure a safe and healthy learning environment for youth who attend their schools. School securitization and zero tolerance have gained broad public and federal support, as well as resources (Addington, 2009; Kupchik, 2010; Muschert, Henry, Bracy, & Peguero, 2014). But simply disciplining adolescents may not be an effective policy toward establishing and sustaining a healthy learning school climate or environment. There are alternative safety policies such as communal schools, peer mediation, and restorative justice that have been found to reduce violence, improve safety, strengthen school bonds, foster healthy relationships, and improve educational progress for all adolescents.

### CONCLUSION

It is evident that police officers, armed security guards, surveillance cameras, and metal detectors have become common features of the disturbing new landscape for American public high schools (Addington, 2009; Casella, 2006; Muschert & Peguero, 2010). Moreover, schools have implemented harsher disciplinary policies and invasive security practices in response to social and educational concerns about bullying, disorder, and violence within schools (Kupchik, 2010; Skiba et al., 2011). It is also clear that misbehavior, disorder, and violence, including at school, can derail developmental and educational progress for adolescents (Finkelhor, 2008; Gottfredson & DiPietro, 2011; Peguero & Bondy, 2011; Staff & Kreager, 2008). On the other

hand, it is also apparent that increasing school security and implementing harsher punishment practices may be having unintended, detrimental consequences (Hagan et al., 2005; Hirschfield, 2008; Kupchik, 2010; Rios, 2011). Although there is emerging research that indicates that increased school securitization and stringent punishment practices may be fostering a "school to prison pipeline," this study provides a line of inquiry that questions whether school securitization and stringent discipline policies are actually ensuring educational progress and success for adolescents.

### REFERENCES

- Addington, L. A. (2009). Cops & cameras: Public school security as a policy response to Columbine. *American Behavioral Scientist*, *52*, 1426–1446.
- Alexander, K., Entwisle, D., & Kabbani, N. (2001). The dropout process in life course perspective: Early risk factors at home and school. *Teachers College Record*, *103*, 760–822. doi:10.1111/0161-4681.00134
- Archambault, I., Janosz, M., Morizot, J., & Pagani, L. (2009). Adolescent behavioral, affective, and cognitive engagement in school: Relationship to dropout. *Journal of School Health*, *79*, 408–415. doi:10.1111/j.1746-1561.2009.00428.x
- Blader, S. L., & Tyler, T. R. (2003). A four-component model of procedural justice: Defining the meaning of a "fair" process. *Personality and Social Psychology Bulletin*, *29*, 747–758.
- Bracy, N. L. (2010). Circumventing the law: Students' rights in schools with police. *Journal of Contemporary Criminal Justice*, *26*, 294–315. doi:10.1177/10439862 10368645
- Bracy, N. L. (2011). Student perceptions of high security school environments. *Youth and Society*, *43*, 365–395. doi:10.1177/0044118X10365082
- Casella, R. (2006). *Selling us the fortress: The promotion of techno-security equipment for schools*. New York, NY: Routledge, Taylor & Francis.
- Casper, J. D., Tyler, T. R., & Fisher, B. (1988). Procedural justice in felony cases. *Law and Society Review*, *22*, 483–507.
- Cataldi, E. F., Laird, J., & KewalRamani, A. (2009). *High school dropout and completion rates in the United States: 2007 (NCES 2009-064)*. Washington, DC: National Center for Education Statistics, Institute of Education Sciences, US Department of Education.
- Center for Social and Emotional Education. (2009, February 26). *The school climate challenge: Narrowing the gap between school climate research and school climate policy*, Practice Guidelines and Teacher Education Policy. Retrieved May 1, 2012, from <http://issuu.com/csee/docs/schoolclimate-challenge#download>
- Cohen, J., & Geier, V. K. (2010). School climate research summary January 2010. *School Climate Brief*, *1*. Retrieved May 1, 2012, from <http://www.schoolclimate.org/climate/schoolclimatebriefs.php>

- Cornell, D. G., & Mayer, M. J. (2010). Why does school order and safety matter? *Educational Researcher*, *39*, 7–15. doi:10.3102/0013189X09357616
- Crosnoe, R., Johnson, M., & Elder, G. (2004). Intergenerational bonding in school: The behavioral and contextual correlates of student–teacher relationships. *Sociology of Education*, *77*, 60–81. doi:10.1177/003804070407700103
- Davis, K. S., & Dupper, D. R. (2004). Student–teacher relationships: An overlooked factor in school dropout. *Journal of Human Behavior in the Social Environment*, *9*, 179–193. doi:10.1300/J137v09n01\_12
- DeLuca, S., & Rosenbaum, J. E. (2001). *Are dropout decisions related to safety concerns, social isolation, and teacher disparagement?* Available at <http://civilrightsproject.ucla.edu/research/k-12-education/school-dropouts/are-dropout-decisions-related-to-safety-concerns-social-isolation-and-teacher-disparagement>
- Devine, J., & Cohen, J. (2007). *Making your school safe: Strategies to protect children and promote learning*. New York, NY: Teachers College Press.
- Dewey, J. (1916). *Democracy and education: An introduction to the philosophy of education*. New York, NY: Macmillan.
- Eccles, J. S., & Roeser, R. W. (2011). Schools as developmental contexts during adolescence. *Journal of Research on Adolescence*, *21*, 225–241. doi:10.1111/j.1532-7795.2010.00725.x
- Entwisle, D. R., Alexander, K. L., & Olson, L. S. (2004). Temporary as compared to permanent high school dropout. *Social Forces*, *82*, 1181–1205. doi:10.1353/sof.2004.0036
- Finkelhor, D. (2008). *Childhood victimization: Violence, crime and abuse in the lives of young people*. New York, NY: Oxford University Press.
- Ghaith, G. (2003). The relationship between forms of instruction, achievement and perceptions of classroom climate. *Educational Researcher*, *45*, 83–93.
- Gottfredson, D. C., & DiPietro, S. (2011). School size, social bonding, and student victimization. *Sociology of Education*, *84*, 69–89. doi:10.1177/0038040710392718
- 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. doi:10.1177/0022427804271931
- Hagan, J., Shedd, C., & Payne, M. R. (2005). Race, ethnicity, and youth perceptions of criminal injustice. *American Sociological Review*, *70*, 381–407. doi:10.1177/000312240507000302
- Hamre, B. K., Pianta, R. C., Downer, J. T., & Mashburn, A. J. (2008). Teachers' perceptions of conflict with young students: Looking beyond problem behaviors. *Social Development*, *17*, 115–136.
- Henry, S. (2009). School violence beyond Columbine. *American Behavioral Scientist*, *52*, 1246–1265. doi:10.1177/0002764209332544
- Hirschfield, P. (2008). Preparing for prison?: The criminalization of school discipline in the USA. *Theoretical Criminology*, *12*, 79–101. doi:10.1177/1362480607085795
- Hirschfield, P., & Celinska, K. (2011). Beyond fear: Sociological perspectives on the criminalization of school discipline. *Sociology Compass*, *5*, 1–12. doi:10.1111/j.1751-9020.2010.00342.x
- Hong, J. S., & Eamon, M. K. (2012). Students' perceptions of unsafe schools: An ecological systems analysis. *Journal of Child and Family Studies*, *21*, 428–438. doi:10.1007/s10826-011-9494-8
- Ingels, S. J., Pratt, D. J., Wilson, D., Burns, L. J., Currivan, D., Rogers, J. E., & Hubbard-Bednasz, S. (2007). *Education longitudinal study of 2002: Base-year to second follow-up data file documentation (NCES 2008-347)*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- Kim, C. Y., Losen, D. J., & Hewitt, D. T. (2010). *The school-to-prison pipeline: Structuring legal reform*. New York, NY: New York University Press.
- Koth, C. W., Bradshaw, C. P., & Leaf, P. J. (2008). A multilevel study of predictors of student perceptions of school climate: The effect of classroom-level factors. *Journal of Educational Psychology*, *100*, 96–104. doi:10.1037/0022-0663.100.1.96
- Kozol, J. (1991). *Savage inequalities: Children in America's schools*. New York, NY: Crown.
- Kupchik, A. (2010). *Homeroom security: School discipline in an age of fear*. New York, NY: New York University Press.
- Kupchik, A., & Ellis, N. (2008). School discipline and security: Fair for all students? *Youth and Society*, *39*, 549–574. doi:10.1177/0044118X07301956
- LeBlanc, L., Swisher, R., Vitaro, F., & Tremblay, R. E. (2008). High school social climate and antisocial behavior: A 10-year longitudinal and multilevel study. *Journal of Research on Adolescence*, *18*, 395–413. doi:10.1111/j.1532-7795.2008.00565.x
- Lo, C. C., Kim, Y. S., Allen, T. M., Allen, A. N., Minugh, P. A., & Lomuto, N. (2011). The impact of school environment and grade level on student delinquency: A multilevel modeling approach. *Crime and Delinquency*, *54*, 622–657. doi:10.1177/0011128709352232
- MacNeil, A. J., Prater, D. L., & Busch, S. (2009). The effects of school culture and climate on student achievement. *International Journal of Leadership in Education: Theory and Practice*, *12*, 73–84.
- Mukherjee, E. (2007). *Criminalizing the classroom: The over-policing of New York City schools*. New York, NY: New York Civil Liberties Union.
- Muschert, G. W., Henry, S., Bracy, N. L., & Peguero, A. A. (2014). *Responding to school violence: Confronting the Columbine effect*. Boulder, CO: Lynne Rienner.
- Muschert, G. W., & Peguero, A. A. (2010). The Columbine effect and school anti-violence policy. *Research in Social Problems and Public Policy*, *17*, 117–148. doi:10.1108/S0196-1152(2010)0000017007
- National Center for Education Statistics. (2012). Fast facts: Dropout rates. Retrieved May 1, 2012, from <http://nces.ed.gov/fastfacts/display.asp?id=16>
- National School Climate Council. (2007). The school climate challenge: Narrowing the gap between school cli-

- mate research and school climate policy, practice guidelines, and teacher education policy. Retrieved May 1, 2012, from [www.schoolclimate.org/climate/policy.php](http://www.schoolclimate.org/climate/policy.php)
- Nishina, A., Juvonen, J., & Witkow, M. R. (2005). Sticks and stones may break my bones, but names will make me feel sick: The psychosocial, somatic, and scholastic consequences of peer harassment. *Journal of Clinical Child and Adolescent Psychology, 34*, 37–48. doi:10.1207/s15374424jccp3401\_4
- Noguera, P. A. (2008). *The trouble with Black boys: And other reflections on race, equity, and the future of public education*. San Francisco, CA: Jossey-Bass.
- Payne, A. A. (2008). A multilevel model of the relationships among communal school disorder, student bonding, and delinquency. *Journal of Research in Crime and Delinquency, 45*, 429–455. doi:10.1177/0022427808322621
- 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*, 749–778. doi:10.1111/j.1745-9125.2003.tb01003.x
- Peguero, A. A. (2012). The children of immigrants' diminishing perceptions of just and fair punishment. *Punishment and Society, 14*, 429–451. doi:10.1177/1462474512452518
- Peguero, A. A., & Bondy, J. M. (2011). Immigration and students' relationship with teachers. *Education and Urban Society, 43*, 165–183. doi:10.1177/0013124510380233
- Peguero, A. A., Popp, A. M., & Koo, D. J. (2011). Race, ethnicity, and school-based adolescent victimization. Advance online publication. *Crime and Delinquency*. doi:10.1177/0011128711398021
- Portillos, E. L., González, J. C., & Peguero, A. A. (2012). Crime control strategies in school: Chicanos/as perceptions and criminalization. *The Urban Review, 44*, 171–188. doi:10.1007/s11256-011-0192-z
- Ramirez, M. (2008). Procedural perceptions and support for the U.S. Supreme Court. *Political Psychology, 29*, 675–698.
- Raudenbush, S. W., Bryk, A. S., & Congdon, R. (2008). *HLM 6.06*. Lincolnwood, IL: Scientific Software International.
- Rios, V. M. (2011). *Punished: Policing the lives of Black and Latino boys*. New York, NY: New York University Press.
- Robers, S., Zhang, J., & Truman, J. (2012). *Indicators of school crime and safety: 2011 (NCES 2012-002/NCJ 236021)*. Washington, DC: National Center for Education Statistics, U.S. Department of Education, and Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice.
- Roeser, R. W., Eccles, J. S., & Sameroff, A. J. (2000). School as a context of early adolescents' academic and social emotional development: A summary of research findings. *Elementary School Journal, 100*, 443–471. doi:10.1086/499650
- Roques, M., & Paternoster, R. (2011). Understanding the antecedents of the “school-to-jail” link: The relationship between race and school discipline. *Journal of Criminal Law and Criminology, 101*, 633–665.
- Rumberger, R. W. (2011). *Dropping out: Why students drop out of high school and what can be done about it*. Cambridge, MA: Harvard University Press.
- Schreck, C. J., Miller, J. M., & Gibson, C. L. (2003). Trouble in the school yard: A study of the risk factors of victimization at school. *Crime and Delinquency, 49*, 460–484. doi:10.1177/0011128703049003006
- Skiba, R. J., Horner, R. H., Chung, C. G., & Rausch, M. K. (2011). Race is not neutral: A national investigation of African American and Latino disproportionality in school discipline. *School Psychology Review, 40*, 85–107.
- Staff, J., & Kreager, D. A. (2008). To cool for school? Violence, peer status and high school dropout. *Social Forces, 87*, 445–471.
- Sunshine, J., & Tyler, T. (2003). The role of procedural justice and legitimacy in shaping public support for the police. *Law and Society Review, 37*, 513–548.
- Tillyer, M. S., Wilcox, P., & Gialopsos, B. M. (2010). Adolescent school-based sexual victimization: Exploring the role of opportunity in a gender-specific multilevel analysis. *Journal of Criminal Justice, 38*, 1071–1081. doi:10.1016/j.jcrimjus.2010.07.010
- Tyler, T. R. (1990). *Why people obey the law*. New Haven, CT: Yale University Press.
- Tyler, T. R., & Blader, S. (2000). *Cooperation in groups: Procedural justice, social identity, and behavioral engagement*. Philadelphia, PA: Psychology Press.
- Tyler, T. R., & Huo, Y. J. (2002). *Trust in the law: Encouraging public cooperation with the police and courts*. New York, NY: Russell Sage Foundation.
- Tyler, J. H., & Lofstrom, M. (2009). Finishing high school: Alternative pathways and dropout recovery. *The Future of Children, 19*, 77–103. doi:10.1353/foc.0.0019
- Wang, M., & Dishion, T. J. (2012). The trajectories of adolescents' perceptions of school climate, deviant peer affiliation, and behavioral problems during the middle school years. *Journal of Research on Adolescence, 22*, 40–53. doi:10.1111/j.1532-7795.2011.00763.x
- Wheelock, A., & Miao, J. (2005). The ninth-grade bottleneck: An enrollment bulge in a transition year that demands careful attention and action. *School Administrator, 62*, 36–40.
- Wilcox, P., Campbell Augustine, M., Bryan, J. P., & Roberts, S. (2005). The “reality” of middle-school crime: Objective vs. subjective experiences among a sample of Kentucky youth. *Journal of School Violence, 4*, 3–27. doi:10.1300/J202v04n02\_02
- Wilcox, P., Tillyer, M. S., & Fisher, B. S. (2009). Gendered opportunity? School-based adolescent victimization. *Journal of Research in Crime and Delinquency, 46*, 245–269. doi:10.1177/0022427808330875