SCHOOL CLIMATE PREDICTORS OF SCHOOL DISORDER: RESULTS FROM A NATIONAL STUDY OF DELINQUENCY PREVENTION IN SCHOOLS

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Hypotheses about the association of school organizational characteristics with school crime and disorder were tested in a nationally representative sample of 254 secondary schools. Relatively small intra-class correlations suggest that most of the variance in the individual measures of school disorder result from within-school, rather than between-school variation. Therefore only a small portion of this variation is potentially explainable by between-school influences. Nevertheless, school climate explained a substantial percentage of the variance in all measures of school disorder, controlling for the effects of community characteristics and school student composition. Schools in which students perceived greater fairness and clarity of rules had less delinquent behavior and less student victimization. Rule fairness and clarity did not influence teacher victimization. Schools with more positive psychosocial climates had less teacher victimization, but climate did not influence student victimization or delinquent behavior.

Keywords: *school disorder; school climate; school; survey; delinquency; violence*

America experienced what has been described as an epidemic of youth violence in the decade between 1985 and 1994 (Cook and Laub 1998). Although the rate of violent youth crime has been declining since then (Cook and Laub 2002), it continues at a rate that is elevated compared to the years prior to the epidemic. Fortunately, serious violent crime *in schools* is now and has always been rare. Only 262 events of school-associated violent deaths occurred in the nation during the past 10 school years (1994 to 1995 through 2003 to 2004; National School Safety Center 2004). Anderson et al. (2001) reported an average annual incidence of .068 school-associated violent deaths per 100,000 students between 1994 and 1999. In comparison, there were 15.45 deaths due to unintentional injury per 100,000 persons aged 5 to 19 years in 2001 (Centers for Disease Control and Prevention 2004).

Young people continue to be the victims of serious violent crime less often in school than away from school. In the 2001 National Crime Victimization Survey (NCVS),[1] 36 percent of all serious, violent crimes against 12- to 18-year-olds (e.g., those including rape, sexual assault, robbery, or aggravated assault) occurred during school or on the way to and from school. Violent victimizations (defined as those crimes included in serious violent victimization plus simple assault) are equally likely to occur out of school and in school. Public concern about school safety has been on the rise, especially in the wake of several highly publicized school shootings that contributed to an increase in homicide rates for students killed in multiple-victim incidents on school grounds between 1992 and 1999 (Anderson et al. 2001). Gallup polls showed the percentage of parents fearing for their children's safety in school increased from 24 percent in 1977 to 53 percent in 1999 (Gallup Poll 1999).

Less serious forms of crime have been relatively common in and around schools for at least the past 30 years. Considering *all* forms of crime measured in the NCVS for the 2001 school year, more crime victimization occurs in school than out of school. In all, 55 percent of crimes against students aged 12 to 18 occurred at school or on the way to and from school, despite their spending only about 18 percent of their waking hours in school. The proportion is highest for theft (58 percent) but also substantial for violent crimes (50 percent). These findings mirror findings from a 1976 national study of victimization in schools (G. D. Gottfredson and Gottfredson 1985) that found that although serious victimization in schools was rare, minor victimizations and indignities (such as swearing and obscene gestures) were common in schools. Schools are by no means havens against crimes. On the contrary, when all criminal victimizations rather than only the most serious are considered, youths are at elevated risk for victimization when they are in school or on the way to and from school.

Recent attempts to prevent serious violent victimization in schools have focused on the characteristics of offenders in an attempt to build screening tools that might successfully identify potential shooters before they act, seeking to identify similarities among the perpetrators of the school shootings that occurred between 1992 and 1999. An investigation into targeted

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violence in schools (U.S. Secret Service 2000) found that no well-defined profile of the school shooter exists, however. The age range of assailants was broad (11 to 21); they came from a variety of racial and ethnic backgrounds and family situations; their academic performance ranged from excellent to failing, and their prior behaviors ranged from having no observed behavior problems to a clear history of violence and weapon use. Identification of potential school shooters is thwarted by the low base rate for these events and because the events are usually embedded in a social and transactional sequence of events that would not be captured by a static screening of individuals (Mulvey and Cauffman 2001).

In contrast to the prediction of rare behaviors (Meehl and Rosen 1955), the prediction of *levels* of criminal behavior displayed by individuals is a more tractable problem. It may also be possible to identify characteristics of *schools* with elevated rates of crime and violence. The following section reviews prior research relating school characteristics to school crime.

Prior Research in Organizational Characteristics Related to School Crime

One of the earliest examinations of the effects of school characteristics on rates of victimization in schools was G. D. Gottfredson and Gottfredson's (1985) reanalysis of the Safe School Study data for a 1976 national sample of more than 600 U.S. secondary schools. Characteristics of the areas in which each school was located (based on 1970 census data) were combined with data from students, teachers, and principals on the level of disorder and personal victimization experienced in the school. In addition to measured characteristics of the community in which the school is located, the researchers developed measures of the sociodemographic characteristics of the schools' students and of the school environment based on reports from students, teachers, and principals. The study showed that these community and demographic characteristics explained 54 percent and 44 percent of the variance in teacher victimization rates for middle/junior and senior high schools, respectively. Specifically, the study found that community poverty and disorganization (including racial composition and socioeconomic status), urban (vs. rural) location, community crime, and total school enrollment (junior high schools only) were significantly related to teacher victimization rates. Racial heterogeneity and compositional characteristics including mean student grade level and the percentage of male students also predicted the level of student but not teacher victimization rates. Nevertheless, statistically controlling for these community and demographic characteristics that are difficult if not impossible to alter, malleable school characteristics accounted for an additional 12 percent and 18 percent of variance in teacher victimization rates in middle/junior and senior high schools.

Statistical models were developed to identify those malleable features of the school environment that directly contributed to the explanation of teacher victimization rates after controlling for exogenous community and student demographic characteristics. Schools in which teachers teach a large number of students; schools with few teaching resources, schools with low levels of cooperation between teachers and administrators, schools in which teachers have punitive attitudes, schools in which the rules are not perceived by students as fair and firmly enforced, and schools in which students had low levels of belief in conventional rules and laws governing behavior experienced higher levels of teacher victimization, net of community and student demographic characteristics.

Results from other school-level studies on the importance of school organization and climate dimensions of measures of misbehavior have been mixed. Galloway, Martin and Wilcox, (1985) and Hellman and Beaton (1986) found no evidence for school effects on student absenteeism or suspension once community characteristics were controlled. In these studies, however, the measures of school characteristics were limited to features of the school building (e.g., age of building), and aspects of formal school organization (e.g., school size, use of ability grouping, staff turnover taken from school and school district records) commonly found in archival records. Welsh, Stokes, and Greene (2000), in a study of rates of disciplinary incidents in 43 Philadelphia middle schools, found "school culture" to reduce disorder, but in this study "school culture" was operationalized using archival measures of student nonattendance and student dropout—indicators commonly used as dependent measures in other studies. Other studies demonstrating school effects on school disorder have used more appropriate measures of school social organization and included more schools. Ostroff (1992), for example, showed that teacher satisfaction and commitment predict student drop-out, attendance, and disciplinary problems. In a study using the same data used in this report, Payne, Gottfredson, and Gottfredson (2003) found that communally organized schools experience less disorder, and that the relationship between communal school organization and school disorder is partially mediated by student bonding.

Several studies have employed contextual analyses or hierarchical linear modeling (HLM; Raudenbush and Bryk 1986) to estimate school effects while controlling for individual-level processes that might produce school-level variation in the outcomes of interest. Felson et al. (1994) examined the effects of normative school values supporting interpersonal violence on individual interpersonal violence, theft and vandalism, and school delinquency.

They found that school norms regarding violence significantly predicted individual involvement in all three forms of delinquent behavior. The percentage of Black students in the school was also related to individual interpersonal violence, controlling on individual demographics. The authors concluded that normative values, in addition to individually held values, provide an additional source of social control. Similarly, Brezina, Piquero, and Mazerolle (2001), in a test of Agnew's macrolevel strain theory, conducted a contextual analysis of the effects of school average anger and approval of aggression on aggressive student behavior, net of individual-level predictors of aggressive behavior. They found that school average approval of aggression, but not school-average anger, predicted individual-level aggressive behavior. This study, conducted on an all-male high school sample, also found that students in larger schools experienced *less* aggression than students in smaller schools.

Bryk and colleagues (Bryk and Driscoll 1988; see also chapter 11 in Bryk, Lee, and Holland 1993) used a subset of schools from the national High School and Beyond study to examine the effects of school organization on student behavior. They hypothesized that schools with a sense of community would have positive effects on student learning and behavior. Indicators of school community included shared values among members of the organization (particularly relating to the purposes of the institution), expectations for learning and behavior, expectations for student achievement, activities designed to foster meaningful social interactions among school members and to link them to the school's traditions, a distinctive pattern of social relations embodying an ethos of caring and involving collegial relations among adults in the institution, and an extended teacher role. The study separated the effects of school composition (e.g., the average academic background of the students, school social class, whether the school had a high minority concentration, and measures of the ethnic and social class heterogeneity of the student population) from the effects of aggregated individual demographic variables. According to the researchers' model, these compositional variables had significant effects on a measure of social misbehavior. Larger school size increased behavioral problems (absenteeism, class cutting, classroom disorder, and dropping out). Communal organization significantly reduced all of the problem behaviors, even controlling for school composition, size, parental cooperation, and student selectivity. In addition, communal organization mediated the effects of composition and school size. The authors concluded that school composition and size influence student outcomes indirectly by facilitating or impeding the development of a communal organization.

Lee and Croninger (1996) reported on a multilevel study of perceptions of safety among high school students using data from 5,486 students in 377 schools that participated in the 1988 National Educational Longitudinal

Survey. The researchers predicted individual student perceptions of safety in school from individual demographic variables (social class, minority status, and gender), school compositional and community characteristics (average school socioeconomic status [SES], high minority enrollment, and urbanicity), school size, sector (public, Catholic, or elite private school), and a measure of positive social relations in the school. They found that 17 percent of the variability in individual perceptions of safety lies between schools, and about 29 percent of this between-school variance, is accounted for by student-level demographics. Adding the school-level variables to the model explains an additional 42 percent of the between-school variance. The compositional characteristics of the school (percentage minority and average school SES) explained the most variance in student-intake-adjusted school average perceptions of safety, followed by positive student-teacher relations. School size and urban location did not predict perceptions of safety, and school sector effects were mediated by composition and student-teacher relations.

Other recent studies have also used hierarchical modeling to examine school climate effects on school disorder as measured by student reports of fighting and being punished in school. Using a sample of 7,583 students from 11 schools, Welsh, Greene, and Jenkins (1999) assessed the effects on disorder of community poverty and residential stability, community crime, school size, student perceptions of school climate, and individual student characteristics. Unlike prior studies, this one conceptualized community in two ways—local, as measured by census characteristics of the community surrounding the school, and imported, as measured by the characteristics of the communities in which the school's students reside. Individual student characteristics (including school effort, rewards, positive peer associations, involvement, belief in rules, as well as demographic characteristics) accounted for 16 percent of the variance in school disorder. School and community characteristics accounted for an additional 4.1 to 4.5 percent. Among the community and school climate indicators, only community poverty (either local or imported) significantly predicted the level of school disorder. As the authors acknowledged, however, these results are based on a sample of only 11 schools. Furthermore, the 11 schools are from one urban school district, which may limit the variability in these measures. Stewart (2003) also predicted school misbehavior as measured by school punishments and fighting from school characteristics in a large, nationally representative sample of 10,578 students from 528 schools. In this study, the measures of school climate came from administrator and student reports of school social problems (a wide range of problem behaviors, many of which have been treated as dependent measures in other studies), and teacher and student reports of school cohesion. Stewart found that although larger schools in urban areas

experienced more disorder, the other school characteristics did not explain a significant amount of variation in student misbehavior.

Wilcox and Clayton (2001) examined a multilevel model of weapon possession in a sample of 21 schools. They found that weapon-carrying was explained by school-level as well as individual-level factors, although the school-level variables explained far less of the variance in weapon-carrying than did the individual-level factors. School-level SES was the only contextual variable to significantly affect weapon carrying. The SES effect was, however, mediated by measures of school capital (a summated scale capturing the mean level of protective factors for students in the school) and school deficits (a summated scale capturing the mean level of risk factors for students in the school).

In summary, prior studies have examined a wide array of measures of school characteristics to predict an equally wide assortment of measures of problem behavior. The heterogeneity across studies makes them difficult to summarize succinctly. Nevertheless, these studies have documented that several clusters of school characteristics are related to the level of disorderly behavior in schools. Many studies have shown that community characteristics and school structural characteristics—variables largely outside of the control of individual schools—account for the lion's share of predictable between-school variance in disorder. These variables include racial heterogeneity, size of school, auspices (public vs. private), urban location, community poverty and disorganization, residential crowding, community crime, and characteristics of the students in the school, including their percentage male and average student age. The level of prior problem behavior of students attending a school also influences the level of disorder experienced in the school. Other studies, however, find that one or more of these structural characteristics of schools are *not* related to student problem behavior once individual predictors of these behaviors have been controlled (e.g., Felson et al. 1994; Lee and Croninger 1996; Welsh et al. 1999).

Prior research has also shown that more malleable school organizational characteristics predict the level of school disorder beyond the effects of the external determinants. Studies have found that schools that establish and maintain rules, effectively communicate clear expectations for behavior, consistently enforce rules, and provide rewards for rule compliance and punishments for rule infractions experience lower levels of victimization (G. D. Gottfredson and Gottfredson 1985). Evidence that schools with lower levels of crime are also characterized by more positive psychosocial climates comes from the work of Bryk and colleagues (Bryk and Driscoll 1988), who have demonstrated that a sense of community in which an extended network of caring adults interact regularly with the students and share norms and expectations about their students is related to lower levels of problem

behavior. Felson et al. (1994) and more recently Brezina et al. (2001) showed that the school normative beliefs influence violence or aggressive behavior, controlling on individual's own beliefs. Lee and Croninger (1996) demonstrated that positive student-teacher relations are associated with lower levels of fear among students, and Ostroff (1992) showed that teacher satisfaction and commitment predict student drop-out, attendance, and disciplinary problems. Most of these school organization effects have been small, however, and not all studies have produced supporting evidence.

The aim of the present research is to test hypotheses about the association of these malleable school organizational characteristics with school disorder net of community and school compositional influences in a recent national sample of schools. In this study, "school disorder" is defined as crimes and acts of incivility either perpetrated by students while in the school or experienced by students or teachers while at school. "Structural characteristics" (or "exogenous characteristics") are defined as characteristics that are largely beyond the control of the school—characteristics of the community in which the school is located (e.g., urban location, neighborhood disorganization, immigration, and crowding), and other characteristics of the school that are externally determined (e.g., racial heterogeneity, size of school, number of different students taught, student average age and gender). "School climate" is defined using two measures of the social environment—perceived fairness and clarity of rules and more positive school psychosocial climates—that are plausibly within the control of the school. The study examines the extent to which (1) school crime is explained by structural characteristics and (2) school climate factors are related to school disorder net of structural characteristics.

METHOD

Sample

The National Study of Delinquency Prevention in Schools (D. C. Gottfredson and Gottfredson 2002; G. D. Gottfredson and Gottfredson 2001; G. D. Gottfredson et al. 2000) was conducted to classify and describe existing school-based prevention programs and practices and to examine factors related to successful implementation of these programs and practices. It also provided national estimates of the amount of crime and violence occurring in and around schools. The study was designed to describe schools in the United States as well as characterize schools by level and location. Accordingly, a sample of public, private, and Catholic schools, stratified by location (urban, suburban, and rural) and level (elementary, middle, and high), was drawn

from the most comprehensive list of schools available—a mailing list maintained by Market Data Retrieval, a commercial mailing-list vendor. A probability sample of 1,287 schools[2] (143 for each cell in the sample design) was selected with the expectation that if a response rate of 70 percent could be achieved, there would be 300 schools responding at each level and 300 schools responding from each location (about 100 per cell or 900 schools overall). Principal, teacher, and student surveys were conducted in 1997 and 1998 (see appendix).

Teacher and student surveys, on which most of the measures in this report are based, were administered only in secondary schools, so this report excludes elementary schools. Generally, all teachers in participating schools were sampled, and a sufficient number of students were sampled to produce an estimated 50 respondents per school. When a student roster containing student gender was available, students were systematically sampled within gender. Otherwise, students were stratified by grade level for sampling.

Response Rates

Of 847 secondary schools asked to participate in student and teacher surveys, 403 (48 percent) agreed to conduct teacher surveys and 310 (37 percent) student surveys. In this final sample, the within-school response rate for the student survey ranged from 16 percent to 100 percent, with a mean of 75 percent, and the within-school response rate for the teacher survey ranged from 12 percent to 100 percent, with a mean of 78 percent. This yielded, on average, 53 student surveys and 36 teacher surveys from which to compute school means. The number of student surveys used to calculate school means was greater than 31 for 95 percent of the schools included in the final analysis. The number of teacher surveys used to calculate school means was greater than 8 for 95 percent of the schools included in the final analysis.

The main reason for nonparticipation at the school level was principal refusal to participate in the study. Only 66 percent of the principals contacted eventually agreed to participate, with nonparticipants usually stating that they were too busy or that the study posed too great a burden on their school. Of the participating principals who did not permit their schools to participate in the teacher- and student-survey activities, many cited local policies that prohibited them from participating.

A comparison of the final sample of 254 schools with the full sample of 847 secondary schools on variables that were available for all schools showed that the final sample was less likely to be located in urban areas and contained a smaller percentage of private schools than the full sample. Also, the grade levels included in the schools differed, with 34 percent of the final

sample and 49 percent of the full sample being high schools as opposed to middle/junior high schools. Several other characteristics of the schools and communities were significantly correlated with participation in the survey, but the magnitude of the differences between the original and final samples are small. For example, 15 percent of students in the final and 16 percent of students in the original sample are African American. The size of the schools in the final sample is 790, on average, although it is 702 in the original sample. The original and final sample did not differ significantly with respect to the following variables: teacher race, level of poverty and disorganization of the community, residential crowding of community, and percentage students male. Implications of these findings for the generalizeability of the study results are discussed later.

Weighting

Nonresponse adjustments and the inverse of sampling probabilities were used to compute weights applied to make the sample as representative as possible of the nation's schools. In previously reported national estimates of school crime, school-prevention programming, and so on, our estimates were weighted. G. D. Gottfredson et al. (2000), however, showed that weighted and unweighted results from *correlational* analyses produced similar results. Because the present study reports only school-level correlations, unweighted data are used.

Schools Included in this Analysis

Certain categories of schools are excluded from this analysis. First, only the 310 schools that participated in both the student and the teacher survey were included in the sample for analysis. This sample contained 32 alternative schools for disruptive youth, whose data included a number of extreme outliers on several of the variables of interest in the study. Furthermore, preliminary analyses indicated that problems of disorder are very different for public schools than for private and religious schools and would require separate analyses. Because only 29 nonpublic secondary schools were included in the sample, we decided to limit the study to public schools. These exclusions resulted in a sample of 255 schools (rather than in 249 because some schools were both private and alternative). Finally, we excluded one school in which student enrollment was an extreme outlier. The final sample for this study is 254 public, secondary, nonalternative schools that participated in both the teacher and the student surveys.

MEASURES

Items and scales composed from principal, teacher, and student questions are described below. Reliability coefficients and intra-class correlations are taken from G. D. Gottfredson et al. (2000). More detailed descriptions of each of the measures are also provided in that document.

School Disorder

Teacher Victimization is based on an 8-item scale from the teacher questionnaire (adapted from the Effective School Battery [ESB]; G. D. Gottfredson 1999) measuring the number of different crimes or acts of incivility experienced by the teacher at school during the current school year. A school's score is the mean across teachers of the proportion of items endorsed. The individual-level alpha is .61, and the intra-class correlation (the proportion of variance in this scale that lies between schools) is .14.

Student Victimization is based on a 7-item scale from the student questionnaire (adapted from What About You [WAY] Form DC; G. D. Gottfredson and Gottfredson 1999) measuring the number of different crimes experienced by the student at school during the current school year. A school's score is the mean across students of the proportion of items endorsed. The individual-level alpha is .61, and the intra-class correlation is .04.

Student Delinquency is based on 4 of the 13 available delinquency items from the student questionnaire (adapted from WAY; G. D. Gottfredson and Gottfredson 1999) measuring the number of different crimes committed by the student during the current school year. The use of a variety scale to measure delinquency rather than a frequency scale is supported by prior criminological research (Huizinga and Elliott 1986). The four items used in this study measure delinquent activities *in school*. These four items are as follows: "In the last 12 months have you purposely damaged or destroyed property belonging to school?" "Hit or threatened to hit a teacher or other adult in school?" "Hit or threatened to hit other students?" "Stolen or tried to steal something at school, such as someone's coat from a classroom, locker, or cafeteria, or a book from the library?" A school's score is the mean across students of the proportion of items endorsed. The individual-level alpha for this scale is .58, and the intra-class correlation is .05.

The intra-class correlations reveal that relatively small percentages of total variance in these measures of school disorder are between schools.[3] That is, most of the variance in the individual measures is variation among individuals within schools rather than between school variance. In this school-level analysis, most of the variance in the individual-level measures is therefore treated as within-school error. This relatively small percentage of

variance between schools in measures of school disorder is consistent with other studies of school disorder. For example, Welsh (2001), in a relatively homogeneous sample of Philadelphia middle schools, reported the percentage of variance between schools varies from 0.4 percent for a measure of victimization to 6.4 percent for a measure of student reports of misconduct, which is primarily a measure of punishments experienced in the school. In a larger sample of schools, Lee and Croninger (1996) reported that 17 percent of the variance in perceptions of fear was between schools. Between-school variance tends to be larger for measures of disorder that are more closely tied to school administrative practices (such as suspensions) and for measures more tied to the emotional climate of the school (such as fear for safety).

School Climate

Fairness of Rules is a 3-item scale from the student questionnaire (adapted from the ESB; G. D. Gottfredson 1999) that measures student perceptions of the fairness of school rules, authority figures, and rule enforcement. It includes items such as "The punishment for breaking school rules is the same no matter who you are." A school's score is the mean across students of the students' average item responses. The individual-level alpha for this scale is .63, and the intra-class correlation is .09.

Clarity of Rules is a 4-item scale from the student questionnaire (adapted from the ESB; G. D. Gottfredson 1999) that measures student perceptions of knowledge of school rules and expectations. It includes items such as "Everyone knows what the school rules are." A school's score is the average of the students' scores on the scale. The individual-level alpha is .62, and the intra-class correlation is .07.

Organizational Focus is a 16-item scale from the teacher questionnaire (adapted from the Organizational Focus Question; G. D. Gottfredson 2000) measuring the degree to which the school has consistent and explicit goals. Examples of items in this scale include "Everyone here is working toward the same ends." A school's score is the mean across teachers of individuals' mean responses to the Likert-type items. The individual-level alpha coefficient is .94, and the intra-class correlation is .26.

Morale is a 12-item scale from the teacher questionnaire (adapted from the ESB; G. D. Gottfredson 1999) that measures the degree of commonality of purpose and the sense that members of the school can depend upon each other to solve problems. It includes items such as "I feel my ideas are listened to and used in this school." A school's score is the mean across teachers of the proportion of items endorsed. The individual-level alpha for this scale is .81, and the intra-class correlation is .28.

Planning is a 9-item scale from the teacher questionnaire (adapted from the ESB; G. D. Gottfredson 1999) measuring teacher experiences with planning and taking action to solve problems. Examples of items in this scale include "How often do you work on a planning committee with other teachers or administrators from your school?" A school's score is the mean across teachers of the mean-item response. The individual-level alpha is .62, and the intra-class correlation is .22.

Administrative Leadership is a 12-item scale from the teacher questionnaire (adapted from the ESB; G. D. Gottfredson 1999) that measures teacher perceptions of the leadership quality of the principal and other administrators in the school and the relations between teachers and administrators. It includes items such as "The administration is supportive of teachers." A school's score is the mean across teachers of teachers' average item responses. The individual-level alpha is .84, and the intra-class correlation is .28.

Exogenous Structural Variables

Percentage students African American is based on data from the Common Core of Data from the National Center for Education Statistics.

Percentage teachers African American is based on data from the teacher questionnaire.

Percentage students male is based on the self-reported gender of students who completed the student questionnaire.

Grade level is a binary variable indicating whether the school is a middle/junior high school (0) or a vocational/senior high school (1).

Student enrollment is based on principal reports of the number of students enrolled in the school from the first principal questionnaire. These principal reports were compared with data from the Common Core of Data and Market Data Retrieval. Clarification from the schools was sought when substantial discrepancies occurred. The natural log of the enrollment was taken to reduce skew.

Number of different students taught is calculated from a question in the teacher questionnaire. Teachers were asked to report how many different students they taught within an average week; responses were "Fewer than 35," "35 to 70," "71 to 100," and "More than 100." Responses were then coded as follows: "Fewer than 35 was coded as 17.5, "35 to 70" was coded as 52.5, "71 to 100" was coded as 85.5, and "More than 100" was coded as 120.

The remaining three exogenous structural variables are based on a factor analysis of several census variables describing the zip code areas in the areas in which the schools resided.[4] The factor analysis produced three factors from which the following factor scores were computed:

Poverty and Disorganization is a factor score based on measures obtained from the 1990 census for the zip code areas in which the school is located. The following census variables are markers for the factor: welfare (the average household public assistance income), female-headed household (the ratio of single females with children younger than 18 to married couples with children under 18), median income (the proportion of households with income below $27,499), poverty (ratio of persons below the 1.24 poverty level to persons above), divorce rate (the ratio of persons older than 15 years who are married to those who are separated, divorced, or have a spouse absent), and male and female unemployment (proportion of unemployed males/females in the labor force). A few schools' scores that were extreme outliers were trimmed to three standard deviations above the mean.

Residential crowding is a factor score computed from 1990 Census variables. Marker variables for the factor are the ratio of households with five or more people to other households and the proportion households not English speaking. These two census variable loaded on the same factor most likely because immigrants often live in densely populated areas.

Urbanicity is a factor score based on 1990 census data for the school's zip code area. The following variables are markers for the factor: population size (total population), an ordinal variable measuring city type (e.g., rural, suburban, urban), and urbanicity (the proportion of people living within an urban area). A few schools' scores that were extreme outliers were trimmed to three standard deviations above the mean.

Table 1 shows the means, standard deviations, actual range, and *n*s for all of the variables described above.

ANALYSIS

The distributional characteristics of the measures to be included in the study were examined first. One variable—student enrollment—was log transformed. Other variables were trimmed[5] to deal with outliers and skew. Exploratory factor analyses were conducted separately for the exogenous variables and the school climate measures to guide decisions about the measurement model. Highly related items and scales were treated as multiple indicators of an underlying construct. OLS regression was used to determine the proportion of variance in the disorder outcomes accounted for by each set of variables. The EQS Structural Equations Program (version 5.7B for Windows; Bentler 1995) was then used to estimate a structural equations model (SEM) of the direct and indirect effects of the exogenous factors and the direct effects of the school climate factors on school disorder, based on the variance-covariance matrix for the transformed and rescaled variables. SEM

TABLE 1: Mean, Standard Deviation, Range, and *n* for All Variables

Variable Name	*Mean*	*Standard Deviation*	*Range*	n
School disorder				
Student delinquency	.18	.06	.06 – .41	254
Student victimization	.22	.05	.10 – .34	254
Teacher victimization	.16	.07	.00 – .52	254
School climate				
Clarity of rules	.76	.08	.52 – .93	254
Fairness of rules	.61	.09	.35 – .83	254
Organizational focus	1.92	.36	.98 – 2.79	254
Morale	.65	.14	.33 – .94	254
Planning	.65	.12	.29 – 1.04	254
Administrative leadership	.93	.16	.49 – 1.22	254
Exogenous factors				
Percentage students African American	14.61	23.25	.00 – 99.69	235
Percentage teachers African American	7.66	16.01	.00 – 90.63	254
Poverty and disorganization	–.11	.70	–1.24 – 3.00	242
Residential crowding	–.01	.79	–1.50 – 3.00	242
Student enrollment	790.32	478.40	97.00 – 2912.00	254
Student enrollment (natural log)	6.49	.64	4.58 – 7.98	254
Number of different students taught	90.07	15.10	24.23 – 120.00	254
Urbanicity	–.20	.95	–2.33 – 2.39	242
Percentage students male	48.64	6.67	25.00 – 68.89	253
Grade level	.34	.48	.00 – 1.00	254

was used because it allows for the simultaneous estimation of measurement and structural models, multiple dependent variables, and mediating variables.

Estimation of these models proceeded in several steps. First, variables were rescaled so that their variances would be approximately equal and the small amount of missing data was imputed for some of the exogenous factors for between 1 and 19 schools,[6] depending on the variable. With one exception, the regression method was used for imputation, using census variables not included in the model to predict scores for the missing variables.[7] For one variable, percent students male, mean substitution was used because no census variable predicted it.

Next, measurement models were estimated separately for the exogenous variables and school climate latent variables using the exploratory factor analysis results as a guide but adding paths as suggested by the Lagrange multiplier test to improve the fit of the model to the data.

TABLE 2: Correlations among Study Variables

	Student Delinquency	*Student Victimization*	*Teacher Victimization*
School disorder			
Student delinquency	—	—	—
Student victimization	.50** (254)	—	—
Teacher victimization	.28** (254)	.19** (254)	—
School climate			
Discipline management	–.55** (254)	–.16** (254)	–.22** (254)
Psychosocial climate	.05 (254)	.17** (254)	–.41** (254)
Exogenous factors			
Concentrated poverty/ African-American	.17* (224)	.06 (224)	.39** (224)
Residential crowding	–.02 (242)	.02 (242)	.23** (242)
Size and urbanicity	–.22** (224)	–.08 (224)	.02 (224)
Percentage students male	.09 (253)	.13* (253)	–.04 (253)
Grade level	–.10 (254)	–.46** (254)	–.11 (254)

NOTE: *n*s are in parentheses.
*$p < .05$. **$p < .01$.

An initial SEM, allowing all nonrecursive paths from the exogenous to the school climate factors and to each of the disorder measures, as well as all paths from the school climate factors to the disorder measures to be unconstrained, was then estimated. In this model, the previously estimated measurement models were fixed, the error terms for the three school disorder measures were allowed to covary, and the error terms for the two school climate measures were allowed to covary. This model did not fit the data well and was improved by freeing the previously estimated measurement paths so that they could be reestimated in this model, deleting paths that, according to the Wald test, could be eliminated without degrading the fit of the model and by adding a few paths or covariances that the Lagrange multiplier test suggested should be added to improve the fit. Several indices of fit are reported for each of these steps: the ratio of the (χ^2/df (best if 3 or less), the nonnormed fit index, and the comparative fit index (both best if greater than .9).

RESULTS

Table 2 shows the correlations among the three school disorder measures and between each exogenous and school climate factor score and each disorder measure.[8] Each exogenous factor is significantly related to at least one of the measures of disorder. The correlations of Size and Urbanicity are small

and nonsignificant with the victimization measures, and this factor's correlation with Student Delinquency is opposite the direction anticipated. When the correlations between Student Delinquency and the individual indicators of the Size and Urbanicity factor were examined separately for middle and high schools, it was found that school enrollment and urbanicity are not significantly related to Student Delinquency at the middle-school level. At the high-school level, significant or nearly significant negative correlations are observed for each of these factors with Student Delinquency. This pattern perhaps results because the most delinquent youths are likely to drop out of high school, and drop-out rates are higher in large, urban schools than in other schools. A negative association of school size and student aggression was also reported by Brezina et al. (2001) in another high-school sample.

Schools with a higher percentage of males experience significantly higher levels of student victimization, and high schools experience significantly lower levels of student victimization, but these exogenous factors are not significantly related to the other disorder measures. Discipline Management is significantly related to all three disorder measures, in the direction anticipated in the literature (reviewed earlier). Psychosocial Climate is more highly related to Teacher Victimization than to the student-reported measures of disorder. The direction is as anticipated for the correlation with Teacher Victimization. A significant correlation in the opposite direction is observed with Student Victimization, however.[9]

An examination of the percentage variance in the school-disorder factors accounted for by the exogenous factors and by the addition of the school-climate factors was conducted. For Student Delinquency, the incremental variance explained by school-climate factors (46 percent) is larger than the variance explained by the exogenous variables alone (10 percent). For the two victimization measures, the incremental variance explained by school-climate factors (14 percent and 13 percent for student and teacher victimization, respectively) is smaller than the variance explained by the exogenous variables alone (26 percent and 22 percent). Even in these analyses, however, the addition of the school-climate factors accounts for a substantial portion of the variance in the school-disorder measures.

The standardized measurement models estimated with EQS are shown in Figures 1 and 2. They accord with the initial exploratory factor analysis results (Payne et al. 2003) except that three correlations are added: Schools located in areas of concentrated poverty and with higher percentages of African American students and teachers have lower percentages of male students, probably because of higher dropout rates for males in these areas. Grade level is correlated with Size and Urbanicity, such that high schools score lower on this factor, but the error term for one of the indicators for this factor—student enrollment—is strongly and positively correlated with grade

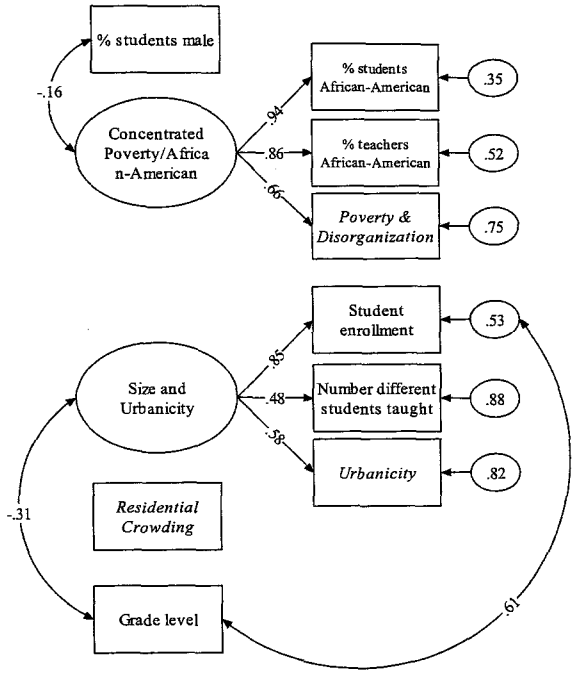

Figure 1: Measurement Model for Externally Determined Factors
NOTE: Italicized variable names are factor scores combining several census items.

level. This outcome occurs because high schools are generally larger than middle/junior high schools, and the ratio of high schools to middle/junior high schools is higher in rural areas. The measurement model for the school climate factors (see Figure 2) is as anticipated by the factor-analysis results, except that it shows that Discipline Management and Psychosocial Climate covary. All of the coefficients in the measurement models are statistically significant, and Table 3 shows that all of the fit indices imply a good fit to the data for both measurement models.

Figure 3 shows the SEM model results in standardized form. Most measurement paths are not shown on this figure because they are almost identical to those shown in Figures 1 and 2. Measurement paths are shown only for three indicators of latent factors for which direct paths were added from constructs other than the construct on which it loaded in the measurement model. These paths were added because the Lagrange multiplier tests indicated that their addition would improve the fit. The addition of these paths to the initial

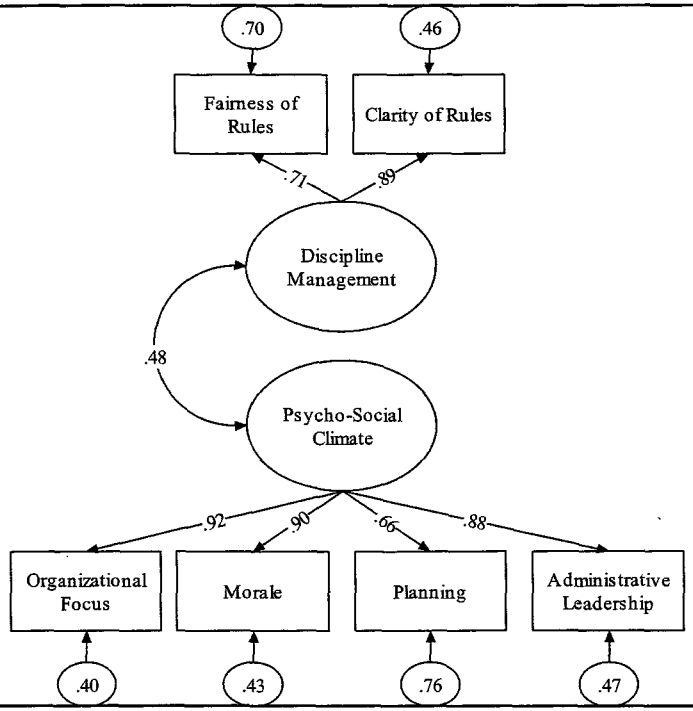

Figure 2: Measurement Model for School Climate Factors

SEM improved the fit, as shown in Table 3. All coefficients in the figure are significantly different from zero, and the fit indicators exceed or are close to the conventional levels recommended.

The figure shows that the exogenous structural variables are related as expected to school disorder. Schools with higher percentages of male students experience higher levels of student delinquency and victimization. Schools in areas of concentrated poverty and with high percentages of African American students and teachers experience higher levels of teacher victimization and student delinquency. Students in these schools also report less fair and consistent discipline management, and teachers' reports of the psychosocial climate are less positive. This exogenous variable has significant effects on specific indicators of Psychosocial Climate, net of the effects on the school climate factors themselves. As the zero-order correlations showed, the Size and Urbanicity factor is related to lower levels of Student Victimization and Delinquency but is not related to Teacher Victimization. This exogenous variable also has significant effects on specific indicators of

TABLE 3: Summary of Model Fit Indices

	df	*NNFI*	*CFI*	χ^2/df
CFA, exogenous factors	27	.93	.95	2.09
CFA, school climate factors	8	.98	.99	2.25
Initial STR	125	.82	.85	3.55
Final STR	153	.83	.88	2.52

NOTE: CFI = comparative fit index; NNFI = nonnormed fit index; CFA = confirmatory factor analysis; STR = structural or path model.

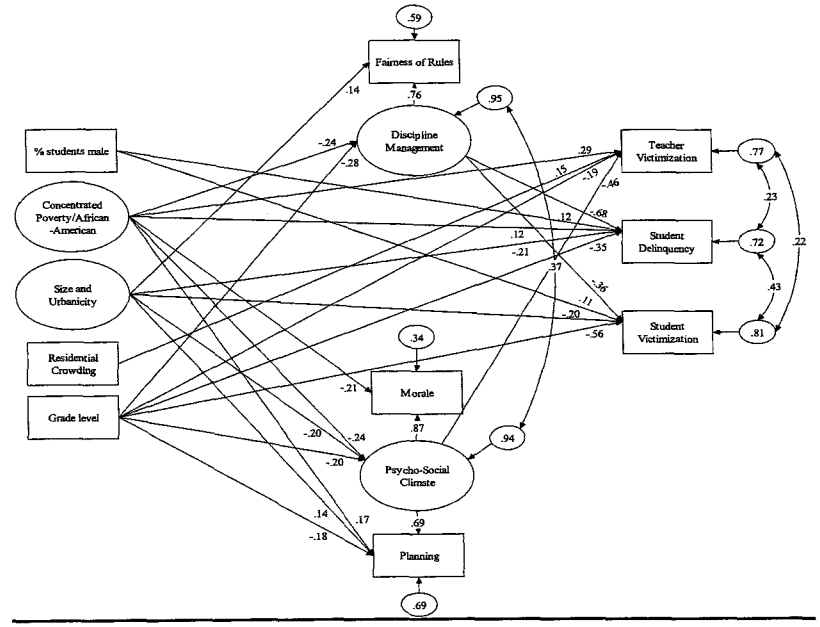

Figure 3: Standardized Structural Equation Model Results

Discipline Management and Psychosocial Climate, net of the effects on the school-climate factors themselves. Schools in areas with higher levels of residential crowding experience more Teacher Victimization, and high schools experience less disorder and lower Discipline Management and Psychosocial Climate.

As can be seen in Figure 3, both Concentrated Poverty/African American and Size and Urbanicity have negative effects on the latent construct Psychosocial Climate but positive effects on the single indicator Planning. To

explore this, the zero-order correlations between these latent constructs, as well as the correlations among their indicators, were examined. It was found that although the majority of the Psychosocial Climate indicators have negative correlations with the indicators of Concentrated Poverty/African American and Size and Urbanicity, thereby leading to a negative relationship between the constructs, the single indicator Planning has a positive relationship with the majority of the Concentrated Poverty/African American and Size and Urbanicity indicators that is strong enough to warrant a separate positive effect. This pattern suggests that despite engaging in higher levels of planning to improve and maintain their schools, teachers in larger, more urban areas serving higher need populations report less positive psychosocial climates.

The school climate factors influence school disorder net of the effects of the exogenous variables. Specifically, better Discipline Management is related to lower levels of Student Delinquency and Student Victimization, and more positive Psychosocial climate is related to lower levels of Teacher Victimization. Note also that these two climate factors covary, suggesting that they influence one another. The direction of this influence is not examined in this report.

The model was also estimated separately for middle and high schools. These results are not shown in order to conserve space, but they show that the unexpected negative paths from Size and Urbanicity to the two student-reported measures of school disorder are nonsignificant in each of the grade-specific models, and all of the significant relations observed between the climate and disorder factors are replicated.

Student-reported school climate factors have significant effects only on the student-reported measures of disorder, and teacher-reported school climate factors have significant effects only on the teacher-reported measures of disorder. This suggests measurement artifacts may account for some or all of the observed effects. We explored this possibility by allowing the error terms for constructs measured from the same survey to correlate. This did not improve the fit of the data to the model or substantively alter the structural coefficients. The pattern of correlations therefore appears to reflect a substantive result rather than an artifact of measurement method.

DISCUSSION

Using a large national sample of secondary schools, this study examined (1) the extent to which school crime was explained by characteristics of the school that are externally determined and, (2) net of these characteristics, the extent to which perceived fairness and clarity of rules and positive school

psychosocial climate were related to school disorder. The findings of this study were not uniform across all measures of disorder. The increment to variance explained due to the addition of school-climate factors to a model containing the exogenous variables was greater than the total variance explained by the exogenous variables for student delinquency. The increment to variance explained in student and teacher victimization due to the school climate factors, although smaller than the total variance explained by the exogenous variables, was substantial. In addition, schools with greater perceived fairness and clarity of rules had lower student delinquency and student victimization. No effect was found for teacher victimization, however. Similarly, schools with more positive psychosocial climates had lower teacher victimization, but psychosocial climate did not show this relation with student victimization or student delinquency.

The study has several limitations shared by most survey research. The NSDPS data are cross-sectional. Although effects can be modeled with these data, we cannot be certain that the direction of the effects accord with the model. Specifically, although theory and prior intervention research support a school-climate effect on disorder, it is also likely that higher levels of school disorder challenge the administration's ability to maintain a sound discipline-management system and degrade the psychosocial climate of the school. Longitudinal data and more evaluations of school-change interventions would be helpful for testing alternative hypotheses about the direction of the effects examined in this article. Also, although we have attempted to control for extraneous factors related to the location and composition of the schools that might influence both school climate and school disorder, it remains possible that some of the observed "effects" of school climate on disorder are spurious. Similarly, potentially influential characteristics of the school environment such as peer culture and parent involvement are omitted from our models. It is not clear how their inclusion might influence the results.

Another limitation is the low school-participation rate and the relation between survey participation and community characteristics. The largest correlates of nonparticipation in the survey were urban location and private (as opposed to public) auspices. The full and final samples also differed with respect to the size and the grade levels included in the school. Therefore, the study results may not generalize well to schools like those not included in the final sample. Explorations of the extent to which attrition biased the results of the study suggested, however, that the basic results of the study would not change with the inclusion of the nonresponding schools. First, private schools were excluded from this study, so their lower response rate is of no import. Second, the main report for this project (Gottfredson et al. 2000) employed weighting procedures to correct for possible nonresponse bias,

and that report showed that unweighted and weighted correlational results were similar. Finally, exploratory analyses in the sample used in this study showed that urbanicity in the full sample of participating schools is related to higher levels of discipline management and lower rates of student delinquency, and is not significantly correlated with student victimization, teacher victimization, or psychosocial climate. It therefore seems likely that the inclusion of the nonparticipating schools would not have influenced most of the relationships studied, and might have increased the observed relationship between discipline management and delinquency rate. It is also possible that the relationships of interest are not linear in the region of the distribution in which the nonparticipating schools fall, or that some characteristic unmeasured by the study and related to the study variables might alter the relationships. Nevertheless, our exploration into potential bias due to attrition seems to indicate that if anything, the results presented here provide conservative estimates of the effect of school-climate factors on school disorder. Future research should, if possible, replicate this study with samples that are more representative of schools in urban communities.

Despite these limitations, the results have several implications. First, this study (and all others reviewed earlier) found that relatively small percentages of total variance in individual reports of delinquent behavior and personal victimization are between-school. This implies that all kinds of schools can expect to experience a range of these problems, and that individual differences in these behaviors and experiences are mostly driven by individual-level influences. It also implies that multilevel analysis may be helpful for explaining a larger percentage of variance in these individual-level outcomes. Nevertheless, an important portion of the variance in these outcomes is between-schools and it is therefore appropriate to explore school-level predictors of them.

The results of the study suggest that schools in areas of residential crowding and concentrated poverty and schools serving high percentages of African American students and teachers experience more school disorder than do other schools and might therefore benefit from targeted prevention resources. Interventions aimed at improving discipline management in these schools might prove particularly fruitful. Similarly, middle/junior high schools and schools that serve a disproportionate number of male students might be targeted for such interventions. Although this may seem obvious, much federal funding to increase school safety (such as Safe and Drug Free Schools and Communities funding) is not targeted at schools with high levels of disorder.

This study adds to prior mixed results on the effects of school size on disorder. Our early work (Gottfredson and Gottfredson 1985) found more disorder in larger schools, but this effect was significant in junior high but not in

senior high schools. Several subsequent studies have reported similar positive associations between school size and school disorder (e.g., Bryk and Driscoll 1988; Stewart, 2003), but others have reported no significant association (Lee and Croninger 1996; Welsh, Stokes, and Greene 2000), or an inverse association (Brezina et al. 2001). Our study finds that at least for student reports of delinquency, the direction of the relationship depends upon the level of the school, with no significant association at the middle-school level and an inverse association at the high-school level. We suggest that this pattern may result because the most delinquent youths are likely to drop out of high school, and drop-out rates are higher in large, urban schools than in other schools. This complex association should be further studied.

The results further suggest that school climate influences the level of disorder experienced in schools. Contrary to earlier studies that have found that characteristics of schools and their communities that are beyond the immediate control of schools explain most of the between-school variance in disorder (summarized in Gottfredson 2001), this study found that the school climate factors explain a substantial percentage of the variance for all disorder measures. For student delinquency, school climate explains more of the variance than do the externally determined factors. This may be due to the more sensitive measures of school climate used in this study, to decreasing influence of community factors on school crime, or both. One of the first studies to document the substantial association between exogenous structural characteristics and disorder (G. D. Gottfredson and Gottfredson 1985) used data that had been collected in 1976—more than 20 years prior to the data-collection period for the NSDPS. The earlier study found that (1) exogenous variables accounted for a much higher percentage of the variance in teacher than in student victimization reports; and (2) these factors explained about twice as much variance in teacher victimization as in this more recent study. This pattern is consistent with the possibility that either teacher victimization is becoming less concentrated in urban areas and more and more evenly distributed across communities over time, or that teachers who teach in suburban and rural schools are becoming more likely to perceive and report victimization behaviors. Further explorations of these possibilities are potential topics for future research.

Schools in which students report that the rules are fair and the discipline is consistently managed experience less disorder, regardless of the type of school and community. This finding does not hold for teacher victimization. On one hand, this pattern might be expected because perceptions of discipline management would most likely effect the potential perpetrators of school crime. But one would expect this association to extend to teacher victimization to the extent that students also offend against teachers. Future research in this area might profitably collect data from victims about the

perpetrator and disaggregate teacher victimizations according to the perpetrator to see if student-perpetrated teacher victimizations are more responsive to school-discipline management. At any rate, the finding that discipline management influences student reports of delinquency and victimization is consistent with earlier research (G. D. Gottfredson and Gottfredson 1985) and has clear implications for prevention.

Teacher-reported psychosocial climate is also significantly related to lower levels of disorder, but this positive effect is found only for teacher reports of victimization. Effects on student reports of victimization and delinquency are in the unexpected direction, although nonsignificant. Further research is required to understand this pattern of effects. This finding is consistent with results from the earlier G. D. Gottfredson and Gottfredson (1985) study, which reported much stronger effects of school climate on teacher than on student-victimization reports. The result is difficult to compare with those of other studies because the outcomes measured from most of the studies that measured school climate carefully are dissimilar to those used here. Bryk (Bryk and Driscoll 1988; Bryk et al. 1993) examined classroom disorder and absenteeism, Wilcox and Clayton (2001) examined weapon carrying, and Lee and Croninger (1996) studied perceptions of safety (Bryk and Driscoll 1988; Lee and Croninger 1996). Our outcome measures are most similar to those used in the Welsh et al. (1999) study, which also did not find school-climate effects on student reports of disorder.

The finding that teacher-reported psychosocial climate is related to lower levels of disorder, but only for teacher reports of victimization, might reflect a misspecification of the direction of effects such that experiences of victimization reduce teachers' perceptions of the school climate. In this scenario, these perceptions of psychosocial climate result from rather than cause school disorder. Another possibility is that the measurement of teacher victimization is influenced by the climate of the school such that in schools in which teachers perceive a positive climate, they also are less likely to perceive certain incidents as victimizations. Future research on this topic should test alternative directional hypotheses, measure psychosocial climate using student as well as teacher reports, and explore the validity of teacher reports of school climate and victimization. More generally, the relatively low correlation between student and teacher reports of victimization and the different patterns of correlations with exogenous variables observed for these two measures (see Table 2) suggest that teacher and student reports of victimization may be measuring different phenomena. Future studies should explore these validity issues.

We attempted in this report to identify characteristics of schools that make them more susceptible to disorder. We found that schools with strong discipline management experience less crime and disorder as reported by students. We also found that schools characterized by high teacher morale, focus, strong leadership, and high teacher involvement are protected from school crime, according to teacher reports. Schools do appear to have an influence on the level of violence they experience, and it therefore seems plausible that interventions aimed at creating stronger discipline-management systems and more positive psychosocial climates should reduce school crime.

These findings may seem obvious, but school administrators do not act accordingly. Gottfredson and Gottfredson (2001) reported results from a national sample of schools (the same one used in this report) on what schools do to prevent delinquency. They showed that although *all* schools make use of rules, regulations, policies, and laws to reduce problem behavior, the clarity and consistency of those rules is often lacking. In only a quarter of schools did the principal report having *predictable* responses to student misbehavior. The same report showed that although most schools employ many different strategies to prevent problem behaviors, approaches that emphasize individual deficits (such as counseling and instructional programs) are considerably more common than attempts to alter the psychosocial climate or the quality of interactions among people in the school. It appears that school personnel operate more on the basis of an individual-deficit theory of problem behavior causation than on the basis of a theory of environmental influences.

Consistent with the findings reported here, research on effective school-based delinquency prevention strategies (D. C. Gottfredson 2001; D.C. Gottfredson, Wilson, and Najaka 2002) has identified strategies for strengthening school and discipline-management practices and enhancing school climate that are effective for reducing a variety of measures of problem behavior in schools. These practices often combine efforts to improve schoolwide discipline policies and practices, school social climate, and the school's general management capability. They often involve helping the school community to achieve consensus on rules for behavior in the school, communicating the norms for behavior to all members of the school community, consistently enforcing the rules, and using positive reinforcement strategies to reinforce desired behavior. They sometimes involve school teams using a structured organization development method to identify problems and develop strategies to overcome these problems, using data feedback to guide the implementation of these plans over a several-year period. Several field trials (e.g., D. C. Gottfredson 1986, 1987; D. C. Gottfredson, Gottfredson, and Hybl 1993) have demonstrated that these principals of sound school management can be effectively adopted by schools. Enhancing school management may hold more promise as a strategy to reduce school crime than attempting to identify potential perpetrators of future school crimes.

APPENDIX
Items Included in Survey Measures

Teacher Victimization
(Responses are "true" or "false")

This year in school have any of the following happened to you personally in this school?
- Damage to personal property worth more than $10.00.
- Theft of personal property worth less than $10.00.
- Theft of personal property worth more than $10.00.
- Was physically attacked and had to see a doctor.
- Was physically attacked but not seriously enough to see a doctor.
- Received obscene remarks or gestures from a student.
- Was threatened in remarks by a student.
- Had a weapon pulled on me.

Student Victimization
(Responses are "yes" or "no")

This year in school, did anyone steal something worth less than $1 from your desk, locker, or other place at school?
This year in school, did anyone steal something worth $1 or more from your desk, locker, or other place at school?
At school this year, did anyone physically attack and hurt you?
At school this year, did anyone force you to hand over money or things worth less than $1?
At school this year, did anyone take money or things worth $1 or more directly from you by force, weapons, or threats?
At school this year, did anyone threaten you with a beating?
At school this year, did anyone threaten you with a knife?

Student Delinquency
(Responses are "yes" or "no")

In the last 12 months have you . . .
Purposely damaged or destroyed property belonging to a school?
Purposely damaged or destroyed other property that did not belong to you, not counting family or school property?
Stolen or tried to steal something worth more than $50?
Carried a hidden weapon other than a pocket knife?
Been involved in gang fights?
Hit or threatened to hit a teacher or other adult at school?
Hit or threatened to hit other students?

Taken a car for a ride (or drive) without the owner's permission?
Used force or strong-arm methods to get money or things from a person?
Stolen or tried to steal things worth less than $50?
Stolen or tried to steal something at school, such as someone's coat from a classroom, locker, or cafeteria, or a book from the library?
Broken into or tried to break into a building or car to steal something or just to look around?
Belonged to a gang that has a name and engages in fighting, stealing, or selling drugs?

Fairness of Rules
(Responses to the first two items are *almost always*, *sometimes*, or *almost never.* Responses for the last item are "true" or "false.")

The school rules are fair.
The punishment for breaking school rules is the same no matter who you are.
The principal is fair.

Clarity of Rules
(Responses to the first two items are *almost always*, *sometimes*, or *almost never.* Responses for the rest of the items are "true" or "false.")

Everyone knows what the school rules are.
The principal runs the school with a firm hand.
The teachers let the students know what they expect of them.
The principal lets the students know what he or she expects of them.

Organizational Focus
(Responses are *false, mostly false, mostly true,* or *true*)

This school clearly signals to faculty and staff what performance is expected of them.
Rules and operating procedures are clear and explicit in this school.
It is difficult to determine what is expected of a person in this school.
The goals of this school are clear.
Everyone understands what behavior will be rewarded in this school.
Some persons in positions of power or authority in this school have conflicting expectations for others.
Everyone here is working toward the same ends.
In this school, people who accomplish the same thing are rewarded in the same way.
People are often confused about what objective they should go for in this school.
In this school people know what to do and when to do it.

People know how to achieve rewards here.
People have often said that it is difficult to decide what aims to work toward in this school.
This school simultaneously pursues many conflicting goals.
My school has a clear focus.
My school is torn up by leaders with different agendas.
Rules and procedures are often ignored in this school.

Morale

(Responses are "true" or "false")

Students here don't really care about the school.
Our problems in this school are so big that it is unrealistic to expect teachers to make much of a dent in them.
I feel my ideas are listened to and used in this school.
I want to continue working with the kind of students I have now.
Please indicate which of the following descriptors are mostly true of the teaching faculty of your school and which are mostly false about the faculty:
- Apathetic
- Cohesive
- Enthusiastic
- Frustrated
- Satisfied
- Tense
- Unappreciated

Planning

(Responses for the first item are *several times a month*, *about once a month*, or *less than once a month.* Responses for the rest of the items are "true" or "false.")

How often do you work on a planning committee with other teachers or administrators from your school?
The principal encourages experimentation in teaching.
Teacher evaluation is used in improving teacher performance.
Are the following statements mostly true or mostly false about the principal of your school?
- Plans effectively
- Progressive

Please indicate which of the following descriptors are mostly true of the teaching faculty of your school and which are mostly false about the faculty:
- Conservative
- Innovative
- Open to change
- Traditional

Administrative Leadership

(Responses for the first item are *strongly agree*, *agree somewhat*, *disagree somewhat*, or *strongly disagree*. Responses for the next item are *not well*, *fairly well*, or *does not apply.* Responses for the rest of the items are "true" or "false.")

The school's administration makes it easy to get supplies, equipment, or arrangements needed for instruction.
In your opinion, how well do teachers and administrators get along at your school?
There is little administrator-teacher tension in this school.
Our principal is a good representative of our school before the superintendent and the board.
The principal is aware of and lets staff members and students know when they have done something particularly well.
Teachers or students can arrange to deviate from the prescribed program of the school.
Teachers feel free to communicate with the principal.
The administration is supportive of teachers.
It is hard to change established procedures here.
The principal of our school is informal.
The principal of our school is open to staff input.

NOTES

1. Percentages calculated from raw numbers provided in Devoe et al. (2003).
2. From the sample of 1,287 schools, 7 were found to be closed and 1 was found not to be a school, leaving 1,279 schools in the sample.
3. For all measures of school disorder, the between-school variance is significantly ($p < .01$) greater than zero, however.
4. Gottfredson, Gottfredson, Gottfredson, and Jones (2003) explored the consequences of obtaining community estimates using the zip code area rather than the actual school attendance area of the school. In a separate study, the zip code–based community estimates used in the present study were correlated with estimates based on the actual school areas. The study found that the two estimates were highly correlated (in the .80s or higher) and that the correlations of the community characteristics measured either way with the substantive variables examined in our study (e.g., school climate and school disorder) were similar. The study concluded that using the actual school boundary information as a basis for defining "community" does not produce different results than the simpler method of using zip code.
5. The number of cases trimmed was very small: Two or three cases were trimmed for each of four variables.
6. More specifically, 9 of the original variables were either divided or multiplied by 10 or 100 in order to achieve uniform variances across measures as recommended in the EQS manual.
7. A total of 10 different census variables were used for imputation. For each imputed variable, those census variables with the largest correlations with the variable to be imputed were used.

8. Results of the exploratory factor analyses are provided in Payne, Gottfredson, and Gottfredson (2003). The exogenous factors in Table 2 are factor scores based on a five-factor solution, which accounted for 82 percent of the variance in the observed exogenous variables.

9. The measures of disorder included in the summary scales for the outcome variables include a relatively wide range of behaviors. We conducted additional exploratory analyses to determine whether the more serious forms of victimization and delinquency had different patterns of correlations with the school-climate measures than the less serious forms. Scales were rescored to include (1) only violent victimization and delinquency items and (2) only nonviolent and less serious items. The scale containing the less serious/nonviolent items generally had slightly higher correlations with the climate measures than the scales containing only the violent items, probably because there is more variability in the less serious behaviors. However, the direction and significance levels of the correlations of the climate measures with the violent victimization and delinquency was generally the same as with nonviolent/less serious victimization and delinquency.

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