

Predicting Perceptions of School Safety

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Abstract

A person-process-context ecological systems model (Bronfenbrenner, 1992) provided an organizing framework for examining student and parental perceptions of school safety among national samples of both adolescents and their parents. Structural equation modeling was used to test a model with paths between demographic characteristics, school processes, adolescents' relationships with others, and both adolescent and parental perceptions of school safety. The models were estimated separately by gender and by ethnic/racial group. An acceptable fit was found for the model overall. Overall, adolescent age, SES, and neighborhood predicted school characteristics of school climate, substance abuse among students, and teacher knowledge of students. School characteristics predicted parental involvement in schools, peers' educational expectations, exposure to delinquent peers, and number of caring adult role models available to the adolescents, which, in turn, each predicted perceptions of school safety. No gender differences were evident. At least two indices indicated an acceptable fit for the model for each ethnic/racial group. Some racial/ethnic differences were found in the paths within the model.

Introduction

Highly publicized violent events in our nations' middle and high schools have focused the attention of the public, students, and the educational community on school safety. According to recent polls, citizens identified school safety as the most important problem facing the nations' schools and a majority of students reported that they sometimes felt unsafe at school (Rose & Gallup, 1999). Beyond the obvious physical dangers, feeling unsafe at school undermines students' learning. Students' perceptions of being unsafe have been associated negatively with grades and school attendance among students (Bowen & Bowen, 1999), as well as disengagement with daily lessons among high risk middle and high school students (Bowen, Richman, Brewster, & Bowen, 1998). Furthermore, unsafe schools are associated positively both with adolescents' problem behavior at school (Bowen & Bowen, 1999) and with leaving school by 10th grade (Bekuis, 1995).

In response to public opinion and to the negative consequences associated with school safety, policymakers and practitioners have rushed to implement safety measures in schools (Dept. of Justice, 1996; Dryfoos, 1998; Flannery, 1997; Talley & Walz, 1994). A search of the literature, however, reveals that little is actually known about student and parental perception of school safety and what factors predict those perceptions. Identifying precursors of perceptions of safety can help prevention and intervention programs to target specific populations that perceive greater risk and to consider increasing those pathways associated empirically with safety.

In the present study, a person-process-context ecological systems model (Bronfenbrenner, 1992) provided an organizing framework for examining student and parental perceptions of school safety among a national sample. The essence of a person-process-context model is the idea that developmental pathways might differ depending on characteristics of persons and of context. Thus, the model can help us understand more about how students and parents perceive school safety in particular contexts. Structural equation modeling was used to test the model and to examine specific pathways for the sample overall, for males and females separately, as well as for African American, Hispanic, and White populations separately.

Personal Characteristics

Several studies have examined student age as a possible personal background characteristic that predicts different perceptions of safety and experiences that contribute to perceptions of safety. However, those studies report inconsistent results. Some studies have observed a pattern whereby older students perceive themselves as being safer than younger students perceive themselves (Bowen & Bowen, 1999;

St. George & Thomas, 1997). Other studies observe the opposite pattern (Griffin & Cook, 1995). These inconsistencies might be due to differences in the age range and location of the study samples; therefore, in the present study we included 10–17 year old students from a national sample. We expected that student age would be linked to perceptions of school safety through two paths, one related to substance abuse among peers (Valois, McKeown, Garrison, & Vincent, 1995) and the other to how well they know their teachers. Substance abuse, although present among early adolescents to a disturbing degree, has tended to increase throughout adolescence (Johnston, O'Malley, & Bachman, 1995), so older students should have been more likely than younger students to attend schools where substance abuse was prevalent. Second, older students and their parents were expected to have had more distant relationships with teachers than younger students (Gathman, 1977). The processes through which substance abuse and knowing teachers in the school are expected to impact student and parental perceptions of safety are discussed below.

Gender is another personal characteristic that might predict perceptions of school safety and experiences linked with such perceptions. A study with school-age children found no gender differences in perceptions of school safety (Hess & Graff, 1999). However, studies of older students have found that adolescent boys were more likely to report being victimized physically (Sheley, 1995) and that they perceived more danger from weapons and fights at school (Bowen & Bowen, 1999) than girls perceived. The definition of safety as related to weapons and to personal involvement in fighting in those studies might have resulted in those gender differences. In this study, a global measure of safety is used in which parents and students reported on their perception of how safe the school was without reference to direct involvement with weapons or fighting. Our measure recognized that bystanders could feel unsafe without necessarily being involved as actors in violent incidents. The models were tested separately for males and for females so that paths related to perception of safety may be examined for gender differences.

Contextual Characteristics

Demographic background characteristics such as neighborhood quality, family socioeconomic status (SES), and racial/ethnic group are variables that have been used to describe the “social address” at which children and adolescents grow up (Bronfenbrenner, 1986). “Social addresses” do not in and of themselves explain how or why individuals living within these contexts develop particular dispositions or beliefs, such as believing that the schools are safe. Rather, a social address is often associated with participation in experiences or relationships that provide

either opportunities or constraints for individuals within a context. Those experiences and relationships constitute developmental processes, which contribute to the development of skills, abilities, or beliefs (in this case, perceptions of safety). For instance, some have argued that neighborhood quality is associated with school safety (Arnette & Walsleben, 1998). Adolescents from better neighborhoods were expected to attend schools that were perceived as being more safe, whereas adolescents from lower quality neighborhoods were expected to attend schools rated as less safe. However, this association between neighborhood and school safety does not identify the experiences and relationships that students encounter which result in perceptions of safety. Here we test our expectation that parents and students who live in poor quality neighborhoods will rate the schools their children attend as being less educationally oriented, orderly, and invitational than schools attended by children who reside in higher quality neighborhoods (Kozol, 1993). Similarly, we expect families with lower socioeconomic status to report that the schools their children attend have less favorable climates than schools attended by families with greater socioeconomic resources.

Race/ethnicity also has been recognized as a predictor of students' perceptions of safety. A recent national survey found that, when compared to other students, more African American and Hispanic students reported that they did not feel safe at school (Harris & Associates, 1999). This is not surprising because minority youth disproportionately live in families with lower socioeconomic status than White students (Spencer & Dornbusch, 1990). Neighborhood and school experiences of African American and Hispanic students also differ from those of White students (Sharp, Johnson, Kurotsuchi & Waltman, 1996). Consequently, analyses were conducted separately for each group so that the overall model and the paths could be examined for possible differences between African American, Hispanic, and White samples.

Mediating Characteristics and Processes

School qualities

In the model tested, qualities of the school setting were expected to be especially important intervening variables, linking both personal characteristics like student age and contextual background characteristics like neighborhood quality and socioeconomic status to perceptions of school safety through student involvement in relationships with peers, parents, and other adults. Qualities of the school setting included several of those which have been discussed as related to perceptions of safety: whether teachers knew the students and families (Devine, 1996), the extent of substance abuse in the students' schools (Arnette & Walsleben, 1998),

and the extent to which these schools were characterized as having orderly, educationally-oriented, and invitational climates (Dept. of Justice, 1996). Those qualities of the school setting were expected to predict adolescents' access to relationships with peers and adults.

Relationships

Schools that evinced an orderly, educationally-oriented, and invitational climate were expected to promote greater parent involvement than schools that did not (Bradley, Mindrup, & Wells, 1999; Brian, 1994). Some anecdotal evidence suggests that parent-school relations are important for fostering safety (Gordon, 1999) and reports aimed at increasing safety often recommend that parent involvement be increased as a means of fostering safety (Arizona State Dept. of Education, 1994; Dryfoos, 1998; South Carolina State Dept. of Education, 1994; Talley & Walz, 1994). Schools with positive climates should also have provided adolescents with greater exposure to peers that aspired to succeed educationally because such exposure fosters motivation (Niebuhr, 1995). A student body that focuses on educational goals has been expected to predict safer schools (Dept. of Justice, 1996).

Substance abuse contributes to a host of problem behaviors among adolescent students, and drugs have been associated with school violence in national discussions of the school safety issue (Talley & Walz, 1994). The prevalence of substance abuse among students in the school communities was expected to be linked to students' exposure to delinquent peers, which should predict adolescent and parental reports that the school was less safe.

Adolescents who have teachers who know them and their families were expected to report that they have caring adult role models in their lives, a factor that contributes to greater perceptions of safety among school-age children (Hess & Graff, 1999). In this study, we investigate whether the findings with school-age children extend to adolescent students. Because teachers see adolescents on an almost daily basis and have a professional responsibility to their students, teachers can have a significant impact on the number of adults adolescents identify as caring role models. We expected that those students who reported that they had adults who cared about them felt more safe and secure at school than students who were bereft of caring adults.

In summary, a model is tested with paths between demographic characteristics and within school processes, adolescents' relationships with others, and both adolescent and parental perceptions of school safety. The models are estimated separately by gender and for the White, African American, and Hispanic samples.

Method

Survey of Parents and Children, 1990-United States, 1994

This study entails secondary analysis of the Survey of Parents and Children, 1990: [United States] (National Commission on Children, 1994). Data collection procedures were designed to gather information from a representative sample of parents living with their children in the continental United States. Households with children age 10 and over were sampled. African-Americans and Hispanics were oversampled to ensure adequate representation of these families. A three-part stratified random sampling strategy was followed in choosing participants. First, a national sample of random-digit telephone numbers was selected from telephone exchanges in the continental United States stratified by region and size of city. Eighty-five percent of the contacted households cooperated in a screening procedure, and 90% of the eligible households completed an interview.

Second, a national sample of random-digit telephone numbers was selected to produce a representative sample of African American families living in areas that the U. S. Census identified as having significant African American population. Households were screened to determine eligibility by race. Eighty-eight percent of contacted households cooperated in the survey and 87% of the eligible African American households completed an interview. Third, a national sample of random-digit telephone numbers was selected to produce a representative sample of the Hispanic population with Hispanic surnames based on households in census tracts that were largely Hispanic (according to the U. S. Census Bureau). Households were screened to determine eligibility by ethnicity. Eighty-seven percent of the contacted households cooperated in the screening and 91% of the eligible Hispanic households completed an interview. Hispanic respondents were offered a Spanish version of the interview. Overall, telephone interviews were completed with 1,738 parents. One 10- to 17-year-old child per family was interviewed in 929 of the participating households with adolescent children.

Sample

The current study uses data from the 658 10 – 17 year olds and their participating parent for whom there was complete data. There were 288 White (n = 129 boys, n = 159 girls), 174 African American (n= 97 boys, n = 77 girls), and 196 Hispanic (n = 102 boys, n = 94 girls) student participants.

Measures

Background Characteristics. Information on the adolescent's age and gender was collected during the initial screening contact. The data set contained multiple indicators of socioeconomic status. First, parents were asked to indicate into which of seven increments of \$10,000 their yearly family income fell (top of scale was > \$60,000). Second, parents were asked to rate how much worry that they had about paying for each of four necessities (food, housing, clothing, and medical expenses) on a four-point scale from none (0) to a lot (3). A financial stress variable (fnstress) was created by averaging the four items (Cronbach alpha = .87). Third, parents reported (yes or no) whether they owned or were purchasing the family home. Finally, parents provided information on their educational attainment and that of their spouse (if married). A parent education variable (pared) was constructed for this study representing the highest of either the mother's or the father's educational level. This variable ranged from 1 = 8th grade education or less to 7 = graduate or professional degree. Family income, financial stress, home ownership, and parental educational attainment formed a latent variable that we termed SES.

Parent and student reports of the neighborhood formed another latent variable (NEIGH). Items on both the parent and adolescent surveys pertained to the residential neighborhood. A neighborhood youth resources variable was comprised of six items from the parent interview. Parents provided reports (yes, no, don't know) on the availability of six after-school and summer resources for youth residing in their neighborhoods. These included: youth groups run by organizations like scouting or boys/girls clubs, sports activities, academic tutoring, summer programs, enrichment lessons, and church (or temple) youth groups. Cronbach's alpha of these six items was .73. Parents used a three point scale (3 = big problem, 2 = somewhat of a problem, and 1 = not a problem) to report the extent to which 7 problems existed in their neighborhood. These indicators of neighborhood social control which have been used and demonstrated to be reliable in other studies (Elliot, Wilson, Huizinga, & Sampson, 1996; Sampson, 1997) included: disregard for rules and laws; crime and violence; abandoned buildings; unsupervised children; social isolation of residents; and unemployment. Cronbach's alpha was .80. Parents also reported whether the neighborhood has safe places for teenagers other than their own home (1 = yes, 0 = no). In addition, parents rated the quality of the neighborhood as a place to raise children using a 5-point scale ranging from 1 = excellent to 5 = poor. Adolescents provided a similar rating on the quality of the neighborhood as a place to grow up using the same 5-point scale as their parents. These five observed variables formed a latent variable of the neighborhood.

School qualities. Three school qualities were examined. First, a latent variable of school climate (SCHRATE) was constructed from student and parent ratings of

the orderliness, educational focus, and invitational climate of the school. Students reported whether (1 = yes, 0 = no) at their school, “kids can get away with almost anything,” the principal cares about students, and “kids who get good grades are respected.” Those student ratings were summed. Using a scale of 1 = F through 5 = A, parents rated teachers’ caring about students, principal’s leadership effectiveness, teachers’ skills, school communication to parents about children, parent participation in decision making, teaching students morals, and maintenance of order and discipline. A low SCHRATE score represented a worse school climate while a high score represented a better school climate. Second, student reports of whether (1 = yes or 0 = no) their teachers knew them well and had talked to at least one of their parents (1 = yes or 0 = no) were summed (KNOWT). Third, student reports of whether drug (1 = yes, 0 = no) and alcohol (1 = yes, 0 = no) abuse (DRUGAB) was prevalent at their school were summed.

Relationships. Four different types of relationships were included in the model as latent variables. Youth identified the number of adults who cared about them and who they admired (CAREAD). Youth also reported on the educational aspirations (PEERED) and the involvement in delinquent acts (11 items) of their peers (DELPEER). A parent involvement variable (PINV) was comprised of parent’s report of their involvement with the adolescent’s school (5 items) including discussing adolescent’s school progress with a teacher, participating in the PTO, attending a school event to see adolescent perform, helping with a field trip or other activity, and helping with a youth group, club, or athletic team.

Perceptions of School Safety. Students and parents provided reports regarding the safety of the school the student was attending. Students reported whether (yes or no) they felt safe at school and parents reported “how safe the school is for students who attend” using a five point scale. These reports formed a school safety latent variable (SSAFE).

Results

Preliminary Analyses

Means and standard deviations can be seen in Table 1. The MANOVA, univariate ANOVA, and Bonferoni multiple comparison results described briefly in this section, which are not presented here in detail to conserve space, are available by request from the authors. Those preliminary analyses determined that there were no significant mean differences by student gender, and the gender by ethnicity interaction was not significant at the .05 level. For the school safety latent variable, White adolescents reported being safer at school than African American and Hispanic adolescents, and White parents rated their adolescents’ schools as safer

than African American parents (Hispanics did not differ significantly from either group).

There also were some mean differences by race/ethnicity in the contextual and mediating variables. Not surprisingly, Whites reported higher SES and better neighborhood conditions than African Americans and Hispanics, and White parents had more years of education than African American parents who, in turn, had more education than Hispanic parents. Hispanics rated their adolescents' schools higher than African American and White parents rated their schools. Peer differences were evident such that (a) African Americans had more delinquent peers than Hispanics (Whites did not differ from either group), and (b) White adolescents reported that their peers had higher educational aspirations than African Americans or Hispanics. The groups were not significantly different on the following variables: adolescent age, teacher knows student, student substance abuse at school, number of caring adults, and parent involvement. Correlation matrices are available upon request from the authors.

Model Testing

Structural equation modeling (LISREL 8, Joreskog & Sorbom, 1993) was used to assess the relations among the variables used in the theoretical model depicted in Figure 1. The theoretical model was evaluated separately for the overall sample, and for the African American, Hispanic and White samples. Results are shown in Table 2. As the data were reasonably normally distributed (e.g., no variables had skewness or kurtosis values exceeding $|1.5|$), maximum-likelihood was selected as the method of estimation.

The first step in evaluating the model was to assess the fit between the hypothesized model and the sample data. The goodness-of-fit index (GFI) is considered a desirable statistic for this purpose because the chi-square (X^2) statistic is easily influenced by large sample size (e.g., Fassinger, 1987). The adjusted goodness-of-fit (AGFI) adjusts the GFI for degrees of freedom. The standardized root mean square residual (SRMR) is a standardized measure of the residuals resulting from the difference between the sample covariance matrix and the model-implied covariance matrix. The root mean square error of approximation (RMSEA) is a measure of error approximation in the population, or discrepancy, per degree of freedom. GFI values above .90, AGFI values above .80, and SRMR values below .10 are often cited as criteria for acceptable fit (e.g., Long, Kahn, & Schultz, 1992; Schumacker & Lomax, 1996). More recently, Hu and Bentler (1999) suggest a combinational rule that SRMR values less than .11 and RMSEA values less than .08 indicate acceptable fit.

Table 1. Means and Standard Deviations for Variables

	Overall Sample	Non Hispanic White Sample	Hispanic Sample	African American Sample
<i>Variables</i>				
1. Income	3.63 (1.63)	4.26 (1.42)	3.10 (1.62)	2.95 (1.55)
2. Fnstress	1.49 (0.93)	1.25 (0.85)	1.68 (0.94)	1.67 (0.97)
3. Ownhm	0.71 (0.45)	0.83 (0.37)	0.65 (0.65)	0.57 (0.50)
4. Pared	4.37 (1.79)	4.95 (1.62)	3.70 (1.93)	4.15 (1.59)
5. Age	13.41 (2.23)	13.58 (2.29)	13.19 (2.08)	13.36 (2.29)
6. Nresrev	4.32 (1.77)	4.91 (1.34)	4.13 (1.82)	3.56 (1.99)
7. Nsafe	0.42 (0.49)	0.45 (0.50)	0.42 (0.50)	0.38 (0.49)
8. Nprob	1.46 (0.45)	1.33 (0.34)	1.50 (0.47)	1.64 (0.52)
9. PbadN	2.35 (1.16)	1.93 (1.02)	2.49 (1.16)	2.86 (1.14)
10. SbadN	2.55 (1.13)	2.28 (1.05)	2.67 (1.12)	2.86 (1.17)
11. PschlR	29.36 (4.70)	28.90 (4.63)	30.38 (4.55)	28.95 (4.83)
12. Schclm	2.96 (0.58)	2.99 (0.62)	2.95 (0.60)	2.92 (0.49)
13. Knowt	1.50 (0.66)	1.45 (0.69)	1.53 (0.66)	1.55 (0.62)
14. Drugs	0.54 (0.77)	0.56 (0.76)	0.56 (.80)	0.48 (0.76)
15. Caread	3.57 (1.36)	3.60 (1.36)	3.55 (1.31)	3.52 (1.43)
16. Delpeer	1.70 (0.76)	1.68 (0.75)	1.60 (0.75)	1.84 (0.77)
17. Peered	2.95 (0.74)	3.08 (0.68)	2.80 (0.78)	2.90 (0.76)
18. Pinv	3.44 (1.38)	3.58 (1.37)	3.37 (1.36)	3.28 (1.42)
19. Ssafe	0.88 (0.32)	0.93 (0.25)	0.84 (0.37)	0.86 (0.35)
20. Pssafe	4.25 (0.94)	4.38 (0.85)	4.25 (0.96)	4.03 (1.02)

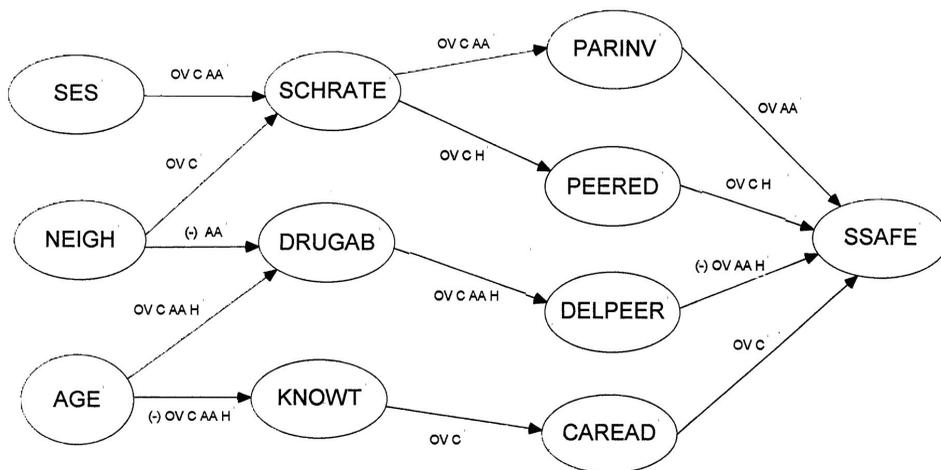
Note. Standard deviations are displayed in parentheses.

Each index and the combinatorial rule indicated that the data had an acceptable fit for the overall sample. The AGFI, SRMR, and combinatorial rule indicate that the data had an acceptable fit for the White and African American samples. For the Hispanic sample, the AGFI and combinatorial rule indicated an acceptable fit. In the cases that acceptable fits were not found, indices suggested marginal fit.

In terms of the measurement of the latent variables, all of the observed variables were found to have significant factor loadings on the appropriate latent variables. Thus, the measurement model was statistically supported.

The model also was assessed by examining the standardized path coefficients for the relations among the latent variables. These coefficients are analogous to standardized beta weights in multiple regression. All of the significant paths were in the expected direction. For the overall sample, all paths were statistically significant except for the influence of neighborhood on school substance abuse. For the African American sample, all paths were statistically significant except for the influence of (a) neighborhood quality on school rating, (b) school rating on peer educational goals, (c) teacher knowing on caring adult, and (d) peer educational goals and caring adult on safe school. For the White sample, all paths were significant except for the influence of (a) neighborhood on school substance abuse, and (b) both parent involvement and delinquent peer on safe school. For the Hispanic sample, all paths were significant except for the influence of (a) SES and neighborhood on school rating, (b) neighborhood on school substance abuse, (c) teacher knowing on caring adult, (d) parent involvement and caring adult on safe school, and (e) school rating on parent involvement.

Fig. 1 - School Safety Model*



*- Significant paths noted (p < .05); (-) denotes negative paths; OV = overall, C = Caucasian, AA = African-American, H = Hispanic.

Table 2. Results of Structural Equation Models*

<i>Paths:</i>	Overall	White	African Am.	Hispanic
SES->SCHRATE	0.65	0.24	0.28	0.02 ns
NEIGH->SCHRATE	0.19	0.84	0.10 ns	0.11 ns
NEIGH->DRUGAB	-.03 ns	0.03 ns	-.15	-.04 ns
AGE->DRUGAB	0.57	0.64	0.54	0.51
AGE->KNOWT	-.23	-.25	-.12	-.27
SCHRATE->PARINV	0.49	0.38	0.99	0.04 ns
SCHRATE->PEERED	0.42	0.39	0.05 ns	0.11
DRUGAB->DELPEER	0.49	0.47	0.60	0.45
KNOWT->CAREAD	0.10	0.17	0.00 ns	0.10 ns
PARINV->SSAFE	0.11	0.12 ns	0.24	0.05 ns
PEERED->SSAFE	0.19	0.26	-.05 ns	0.26
DELPEER->SSAFE	-.24	-.05 ns	-.41	-.31
CAREAD->SSAFE	0.12	0.24	-.01 ns	0.07 ns
<i>Goodness of fit indices:</i>				
c2 (160)	674.56	385.61	307.58	341.96
GFI	0.90	0.88	0.85	0.85
AGFI	0.87	0.84	0.81	0.80
SRMR	0.086	0.091	0.098	0.11
RMSEA	0.070	0.070	0.073	0.076

*Completely standardized estimates; all paths significant ($p < .05$) unless ns indicated

Discussion

Analyses demonstrated that school characteristics and relationships mediated adolescents' background characteristics and perceptions of school safety. Consistent with Bronfenbrenner's (1992) model, paths differed by characteristics of persons and context.

Personal Characteristics

Age

In this national sample, older adolescents and their parents did not report greater safety at school than younger adolescents, as has been reported in several previous studies (Bowen & Bowen, 1999; St. George & Thomas, 1997). However, in the present study, indirect relationships were observed between age and school safety. First, age was associated with the adolescent's report of the teacher knowing them and their parents such that younger adolescents, as compared to older, believed that their teachers knew them and their parents. Adolescents who reported that their teachers knew them and their parents also identified more caring adult role models in their lives, which was associated with greater perceptions of school safety. Second, as expected (Johnston, et al., 1995), older adolescents were exposed to more substance abuse at school, which predicted exposure to delinquency that was associated with perceptions of the school as less safe. Younger students were more likely to feel safer at school when they had more positive relationships with adults at school and less exposure to substance abuse and delinquency among their peers.

Gender

Perceptions of school safety did not differ by gender. Previous research shows that male, as compared to female, students are at greater risk for injury in schools (Hess & Graff, 1999), more likely to report being victimized physically (Sheley, 1995), and more likely to perceive danger from weapons and fights at school (Bowen & Bowen, 1999). The definition of safety in those studies as related to weapon use or as being an actor in fights might have resulted in those gender differences. The findings in the current study using a global measure of safety highlight the potential negative effects of unsafe conditions on all students, even those who are not as likely to carry weapons or to be injured physically. This is similar to research on unsafe neighborhoods, which has indicated that vicarious experience as a witness of dangerous conditions is linked to fearful perceptions (Martinez & Richter, 1993).

Contextual Characteristics

The findings in the present study are consistent with other reports that have linked better SES and residential neighborhood to more pleasant and advantaged school conditions (Kozol, 1991). In the current study, experience of a more positive

school climate was linked to school safety through relationships with parents who were more involved at school and with peers who had higher educational aspirations. The implications of these associations are discussed below.

Mediating Processes

The findings demonstrated that positive climate was linked to greater parent involvement and to higher educational aspirations among students, which were, in turn, linked to reports of safer schools. This indicates that improvement of a school's climate might be an effective way to promote parent involvement and to increase school safety. There is a substantial literature to draw upon for those wishing to pursue improvement of school climate (e.g., Hoy, Tarter & Kottkamp, 1991). It is especially important for researchers to focus more carefully on school climate in the current push for implementing safety measures like metal detectors, locker searches, and police officers or security guards assigned full time to high school campuses. We know little about the effect of implementing such measures on school climate.

Overall, students who reported that their teachers know them and their family also report that there are more caring and supportive adult role models available to them and, consequently, perceive that the school is safer. Relationships with teachers tend to become more distant during adolescence, partly because students have more than one teacher, but some schools have established practices that promote close, caring working relationships between teachers and students. Meier (1995), writing from experience, argues, "Every child is entitled to be in a school small enough that he or she can be known by name to every faculty member in the school and well known by at least a few of them, a school so small that family can easily come in and see the responsible adults" (p. 117). Other high schools have successfully implemented the American Psychological Association's Learner Centered Principles, which include an emphasis on teacher-student relationships (Midcontinent Regional Educational Laboratory, 1994).

Contact with delinquent peers was an important predictor of school safety. Consistent with data collected by the National Household Education Survey in which students reported that substance abuse in school was a bigger problem than being attacked physically (Kimweli, 1997), contact with delinquent peers was predicted by the level of substance abuse in the schools. These findings suggest that schools might benefit by focusing on ways to limit substance abuse levels among students and to buffer contact with delinquent youth. One promising means for reducing substance abuse levels is to inform students that substance abuse is not normative among adolescents (Haines, 1998); other research-based prevention efforts have

been described for schools by the National Institute on Drug Abuse (Sloboda & David, 1999). Recent longitudinal research reported that participation in extracurricular activities at school at some time during grades six through ten mitigated high-risk adolescents participation in delinquency, especially when their social network also participated (Mahoney, 2000).

Race/Ethnicity

The model received some empirical support for each of the ethnic/racial groups. In this study, perceptions of school safety differed by racial/ethnic group. Similar to recent national surveys (Harris & Associates, 1995), Whites perceived the schools as safer than did either Hispanics or African Americans. Whites also had higher socioeconomic status and lived in neighborhoods with more resources and fewer problems than did minority families. These differences in background characteristics provided empirical justification for conducting analyses separately by racial/ethnic group. It should be noted that the data fit for the Hispanic sample, although acceptable on two indices, was not as strong as the fit for the other samples. This might be because there is considerable variation within the Hispanic sample. For example, some Hispanic families are more recent immigrants who have different experiences than Hispanics who have been in the United States for several generations.

Some racial/ethnic differences also were found when examining the paths within the model. The quality of the families' residential neighborhoods predicted school climate for the White sample but not for the Hispanic or African American samples. It might be that a number of the minority students attended schools outside of their neighborhoods. The minority samples in this data set were drawn from just the type of neighborhoods that have been targeted by desegregation and school choice plans over the last several decades. Information was not available in the data set on how many students attended schools outside their neighborhoods. Using a much smaller low-income, urban-center sample, Shumow, Vandell, and Kang (1996) found that parents whose young adolescents attended neighborhood schools rated the school quality lower than parents whose young adolescents attended choice schools, but that difference was not statistically significant. Future studies should consider participation in school choice plans as a possible moderator of relationships between neighborhood quality and school ratings.

Several ethnic/racial differences were found between school qualities and relationships experienced by the students. The proportion of minority adolescents who reported that their teachers knew them and their parents did not differ from that of White adolescents. However, in contrast to the White students, teachers

knowing them and their families did not result in the minority students reporting that there were more caring and supportive adults in their lives, which might indicate that the teachers' contact with them and their parents was not positive. This is consistent with reports that many Hispanic students describe feeling alienated at school because teachers do not care about them (Nieto, 1997) and that African American and Hispanic students perceive that they are disciplined more harshly than other students (Davidson, 1996). The finding that, for minority adolescents, knowing their teachers did not predict the number of adults in their supportive network needs to be further explored by examining the quality of teachers' relationships with minority youth. For Hispanic adolescents, there is some qualitative evidence that caring teachers can play an important role in their development (Salas, 2000). A promising direction might be to foster positive relationships between students and teachers/other adults in schools through programs designed for that purpose and then to examine the quality of these relationships as a source of support. In the present study the number of caring adult role models did not predict school safety for these minority youth, even though minority youth reported having as many caring adults in their support network, suggesting that those caring adult role models exist outside the school context.

Peer variables operated differently in the three racial/ethnic groups. The extent of contact with delinquent peers was not a factor in perceptions of school safety for White students, but it was for both African American and Hispanic students. A school context in which peers had high educational aspirations predicted both White and Hispanic students' perception of safety, but that peer characteristic was not related to perceptions of safety among African American students. The positive relationship with teachers observed among White, but not minority, students might explain the greater influence of peers on the minority students' perceptions of safety. The minority students did not believe that the teachers were supportive, so perhaps delinquent peers had a greater influence on the minority students' perceptions of safety because they did not believe that they could depend on teachers to ensure a safe school environment.

For the African American adolescents, parent involvement was more important than peers' educational focus in terms of predicting perceptions of safety. Interestingly, parent involvement was strongly predicted by the school climate perceived by African Americans and, in turn, predicted perceptions of school safety. However, in the case of Hispanic parents, who provided more positive ratings for school climate than African American parents, those ratings did not predict parental involvement, nor did parental involvement predict perceptions of school safety. Other researchers also have found that Hispanic parents provide high ratings of their children's schools, yet those ratings did not correspond to greater involvement in their children's schooling as they did for African American and White parents (Stevenson,

Chen, & Uttal, 1990). Moreno and Lopez (1999) have argued that Hispanic parents, regardless of their educational level, might have an “immigrant zeal” (p. 97) which leads them to be optimistic and positive about their children’s school situation and demonstrated that their involvement is predicted by their educational level, not their opinion of the school. In the current study, data were not available on extent of acculturation, so that explanation could not be tested empirically here.

It should be noted that the racial/ethnic make-up of the schools these students attended could be a factor in predicting the safety concerns of the students and their parents. For example, minority students who attend predominately White schools might feel less safe in those schools than in schools that are predominately African American or Hispanic. Unfortunately, the data set did not contain school level data so we could not investigate such possibilities. Future studies could examine the racial/ethnic make-up of the student body and faculty as possible predictors of student and parent perceptions of safety.

In summary, parents and students who perceive their schools to be safe describe healthy communities in which students are focused on education, supported by parents, teachers, and other caring adults, and sheltered from negative peer behaviors. It is perhaps not surprising that such schools are perceived as being safer than schools that do not have flourishing educational communities. Specific racial/ethnic differences were found in the overall pattern, suggesting that schools might employ different strategies to foster healthy communities with students and parents of varying ethnic/racial backgrounds.

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