Student Violence Against Teachers in Large U.S. School Districts: Prevalence and Risk Factors

John McCluskey
Professor
Department of Criminal Justice
Rochester Institute of Technology
John.mccluskey@rit.edu
585-475-2666

Guan Saw
Associate Professor
School of Educational Studies
Claremont Graduate University
guan.saw@cgu.edu
909-607-3784

Byongook Moon
Professor
Department of Criminal Justice
University of Texas San Antonio
byongook.moon@utsa.edu
210-458-2622

Under Review

This project was supported by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice (Award No. 2020-CK-BX-0004). The opinions, findings, and conclusions or recommendations expressed in this publication/program/exhibition are those of the author(s) and do not necessarily reflect those of the U.S. Department of Justice.

ABSTRACT

The present study investigated the risk factors of teacher victimization using opportunity theories as a framework. A random sample of 2,266 teachers, surveyed across two waves of data collection, was used to explore victimization via physical assault, sexual harassment, and theft/vandalism. Consistent with previous research, we found a significant incidence of violence and aggression directed toward teachers by students. Approximately 1 out of 10 teachers in the sample reported a physical assault and sexual harassment victimization respectively in the 12 months prior to the survey, while more than a quarter of the sample reported incidents of theft/vandalism victimization. Multivariate analyses indicate that school context and environment have a strong impact on likelihood of victimization and suggests pathways for intervention.

Key Words: Teacher Victimization, School, Teachers, Opportunity Theories

Introduction

Recently, local and national news organizations have reported extensively on instances involving students' aggression and violence directed toward teachers in K-12 school settings. For instance, in Ohio, a teacher suffered a severe brain injury following a student's attack to the head; in Florida, a teacher was attacked by a student after confiscating his Nintendo Switch, leading to five broken ribs and additional health complications; in Nevada, a high school teacher was violently beaten unconscious by a student. These incidents illuminate the growing concern regarding students' violence and aggression directed at teachers in the United States. Furthermore, an expanding body of empirical studies (see Espelage et al.,2013; Longobardi et al., 2019; Moon & McCluskey, 2020; Moon, McCluskey, & Saw, 2023; Moon, Morash, & McCluskey, 2021; Peist, McMahon, Davis-Wright & Keys, 2024; Reddy et al., 2023) indicates a profoundly concerning trend in the prevalence of teacher victimization and its detrimental impacts on victimized teachers. For example, a meta-analysis of 24 research studies revealed that within a two-year period, the prevalence of any type of teacher victimization ranged from 20% to 75% (Longobardi et al., 2019). Also, the findings from the American Psychological Association Task Force's survey show that approximately 14 percent of teachers and 22 percent of school staff were victims of physical violence perpetrated by students during and subsequent to the COVID-19 emergency. Regarding the negative impacts of teacher victimization, several studies (e.g., Moon & McCluskey, 2020) highlight that teacher victimization has adverse consequences such as emotional and physical distress, heightened levels of job stress and dissatisfaction, a sense of distrust and disconnection from students and schools, and increased likelihood of leaving the teaching career. Such consequences pose significant challenges to the overall health and effectiveness of the education system.

Empirical studies conducted thus far have provided valuable information about the prevalence and harmful effects of teacher victimization. However, limited research (Huang, Eddy, & Camp, 2020; Moon & McCluskey, 2020; O & Wilcox, 2018) has been conducted to examine risk factors associated with violence directed toward teachers by students, both at the individual and school level. Additionally, there is a notable gap in empirical research concerning whether the policies implemented by schools specifically to address teacher victimization are effective in preventing and reducing the risk of teacher victimization by students. Utilizing the opportunity perspective as a theoretical framework, which has been adopted extensively in other contexts of victimization, the current research seeks to fill these gaps by analyzing data from a longitudinal research project involving a random sample of 2,266 middle and high school teachers among 50 largest school districts across the United States.

The current research contributes to at least three primary aspects of the emerging literature on teacher victimization and the applicability of opportunity theories in understanding associated risk factors. First, the present research is the first large-scale comprehensive investigation of dynamic aspects of teacher victimization. Second, this research measures three different types of violence and aggression directed against teachers, focusing on physical assault, sexual harassment, and theft/vandalism to explore similarities and differences in the risk factors associated with each type, whereas prior research has often been restricted to assault. Third, in addition to examining individual and school-level risk factors, we also investigate the potential influence of school policies on victimization. This is an area largely unexplored in the literature and prior research (c.f. Astor et al., 2024), but vital for informing the development of more effective strategies aimed at fostering safer environments for teachers within schools.

Below, we first discuss the prevalence of various types of teacher victimization. Next, the study reviews teacher victimization and risk factors in the context of a multilevel opportunity theoretical approach (Wilcox, Land, & Hunt, 2003) and summarizes relevant empirical findings. Third, the data collection and key independent and dependent variables are described. Fourth, multivariate analyses are employed to investigate the applicability of multilevel opportunity theories in explaining the causes of teacher victimization. Finally, the key findings and related policy implications are discussed in the context of opportunity theory.

Literature Review

This research focuses on students' violence or aggression towards teachers, including both physical assault and non-physical aggression such as sexual harassment, and theft/vandalism. While teachers can face victimization from parents or primary caregivers of students, extant research (see Moon et al., 2015) found that a relatively small proportion of victimized teachers reported incidents involving parents, especially in cases of physical assault and sexual harassment. Therefore, the primary focus of the current research is on teachers' victimization by students, while also acknowledging the potential for parental involvement.

Over the last decade, a growing body of empirical research on teacher victimization (Gregory, Cornell, & Fan, 2012; Moon et al., 2020; Tiesman et al., 2013; Wei et al., 2013) indicates that violence directed towards teachers in school is highly prevalent and widespread across the nation, with substantial negative impacts on victimized teachers. For example, three statewide empirical studies (Gregory et al., 2012; Tiesman et al., 2013; Wei et al., 2013) found that approximately 3 to 8 percent of teachers in the samples reported experiencing physical assaults by students. Similarly, the results of the 2017 Indicators of School Crime and Safety

(2018) show that 5.8 percent of public-school teachers in a nationwide sample reported experiencing physically assaulted by student, while 9.8 percent reported being threatened with physical injury during the last 12 months prior to the survey. Moon and McCluskey (2020) examined the prevalence of seven distinct types of teacher victimization by students, analyzing a random sample of 1,628 middle and high school teachers in the southwest region of Texas. The results indicate that 8 percent of participants reported physical assault victimization by students, while 11 percent and 26 percent were victims of sexual harassment and theft/vandalism respectively in the 12 months prior to the survey. In a recent nationwide cross-sectional study with a non-random sample of 9,370 K-12 teachers, the findings (McMahon et al., 2022) found that 14 percent of teachers in the sample experienced at least one instances of physical assault, while 25 percent reported incidents of property victimization during the COVID-19 pandemic.

Theoretical framework: Multilevel opportunity theories for victimization

The present research utilizes a multilevel crime opportunity perspective, a theoretical framework frequently applied in previous victimization research (Lynch & Cantor, 1992; Sampson & Wooldredge,1987; Roh, Kim, & Yun, 2010; Rountree, Land, & Miethe, 1994; Tillyer, 2015; Tillyer, Wilcox, & Gialopsos, 2010; Wilcox, Madensen, & Tillyer, 2007), to explore risk factors associated with teacher victimization. This perspective suggests that characteristics at both micro- and macro-levels have simultaneous effects on the likelihood of crime occurrence and victimization (Wilcox, Land, & Hunt, 2003). In other words, individual-level factors like risky activities/life styles, absence of capable guardianship, target vulnerability, or antagonism, along with environmental-level contexts such as informal social control in a neighborhood, fairness/clarity of rules in school, play critical roles in creating opportunities for crime and victimization (Wilcox et al., 2007).

Micro-level opportunity factors and victimization

Routine activity theory, a micro-level theory within the opportunity perspective, posits that a person's daily routines and lifestyles can affect the likelihood of victimization when suitable/attractive targets, the absence of capable guardians, and motivated offenders converge in both space and time (Cohen & Felson, 1979). Suitable targets indicate persons or items possessing high value, visibility, accessibility, and/or low inertia (i.e., small size and low weight). Capable guardianship refers to persons (e.g., parents, teachers, police officers) and/or objects (e.g., CCTV, self-protective devices, alarm system) which can diminish target suitability, thus deterring a potential offender from committing crime. Numerous studies with diverse research populations and various types of victimization have provided empirical support of routine activity theory in explaining the etiology of victimization (see Lauritsen & Carbone-Lopez, 2011; Mustaine & Tewksbury, 1998; Schreck & Fisher, 2004). For example, engaging in nighttime activities away from home is significantly related to criminal victimization as such activities can heighten the target suitability and reduce the presence of capable guardianship (Fisher, Sloan, Cullen, & Lu, 1998; O & Wilcox, 2018). Others found that social and life activities of female university students, such as nighttime outings or drug involvement, were significant predictors of stalking and sexual assault victimization (see Mustaine & Tewksbury, 1998, 2002). Students' involvement in extracurricular activities such as interscholastic sports or club is significantly related to victimization at school (Peguero, 2009).

Finkelhor and Asdigian (1996) have proposed Target Congruence Theory as another micro-level opportunity theory. It presents the concepts of target vulnerability, target gratifiability, and target antagonism to explain how personal characteristics and attributes can increase the likelihood of victimization, regardless of an individual's lifestyle and routine

activities. Target vulnerability refers to potential victims' inability to resist or deter victimization due to the factors such as their physical size/strength and/or psychological/emotional condition (Finkelhor & Asdigian, 1996). Target gratifiability indicates the qualities, possessions, and/or attributes of potential victims that offenders would desire to acquire or manipulate. For instance, young females are at a higher risk of experiencing sexual harassment or assault due to their gender. Target antagonism is defined as individuals' possession of certain characteristics that "arouse the anger, jealousy, or destructive impulses of the offender" (Finkelhor & Asdigian, 1996, p. 6). The examples of target antagonism include ethnic/racial minority and sexual orientation status for hate crimes.

Target congruence has been used in explaining the etiology of various types of victimization, such as intimate partner violence (see Sween & Reyns, 2017) and violence against racial minorities and LGBTQ individuals (see Zavala & Guadalupe-Diaz, 2019). For instance, Sween and Reyns (2017) conducted a study with a sample of 1,452 participants in Canada to examine whether victims' characteristics associated with vulnerability, gratifiability, and antagonism are related to an increased risk of violent intimate partner victimization. As predicted by the theory, the results show that measurements of target vulnerability (e.g., limited contact with others, being monitored by his/her partner) and gratifiability (e.g., name calling, damaging/destroying personal property) are significantly and positively related to intimate partner violence victimization. These findings suggest hypotheses specifying a variety of individual characteristics and attributes to elevated victimization risk.

Macro-level opportunity perspectives and victimization

Multilevel analyses of victimization, drawing, in part, from social disorganization theory, argue that the likelihood of an individual experiencing criminal victimization is partially influenced by broader social and environmental factors (Rountree et al., 1994). Social disorganization theory, for example, suggests that community characteristics such as residential mobility, density, family disruption rates are significantly related to increased crime and victimization rates.

As per Miethe and McDowall (1993), community-level characteristics can affect victimization risk in two distinct ways. First, potential offenders can receive cues regarding the degree of informal social control and perceived attractiveness of individuals and properties within the neighborhood context (Rountree et al., 1994). Second, individual variations in lifestyle may not significantly change risk in places where formal and informal social control networks is severely compromised, but, in communities characterized by strong social control, potential offenders may consider the personal characteristics of their potential targets (see Rountree et al., 1994).

A number of empirical studies (see Tillyer et al., 2011) explored integrated and multilevel opportunity perspectives in understanding victimization across various samples and settings. These studies offer empirical evidence supporting a multilevel crime opportunity perspective, suggesting that heightened victimization is influenced by both individual and contextual opportunities (Burrow & Apel, 2008; Edwards & Neal, 2017; O & Wilcox, 2018; Tillyer et al., 2010). For instance, characteristics of communities or schools, such as the lack of informal control, disorder, presence of gangs, and poverty are more likely to increase an opportunity of violent behaviors and criminal victimization. Burrow and Apel (2008) analyzed data from the 2001 and 2003 School Crime Supplements to the National Crime Victimization

Survey and found that two of the school climate measures (school disorder and rule clarity) were significantly related to school assault and school larceny. Students enrolled in schools characterized as having clearer rules and expectations, with effective enforcement mechanisms in place, were less likely to become victims of assault or larceny. Similarly, Edwards and Neal (2017) found that the characteristics of school and community, particularly the poverty rate at the school level, were significantly related to physical violence victimization.

Opportunity theories and teacher victimization

Several studies (Moon & McCluskey, 2020; O & Wilcox, 2018; Huang et al., 2020) used the opportunity framework to examine the risk factors associated with teacher victimization by students in school settings. Preliminary results indicate that both individual- and school-level factors have significant effects on teacher victimization, consistent with prior findings on victimization in other contexts. O and Wilcox (2018) conducted a study involving a sample of approximately 4,100 teachers in Kentucky and found that teachers' classroom behaviors (hesitation to confront students, authority) and outside activities were significant predictors of teacher victimization. Moon and McCluskey (2020) used a sample of 1,628 middle and high school teachers and showed that teachers' leadership and uncertain behaviors toward students, as well as teachers' helping/friendly behaviors toward students were significantly to physical assault and sexual harassment. That research also suggested that middle and high schools had vary risks for some types of victimization.

Finally, Huang et al. (2020), using a sample of 24,070 teachers across 4,610 public schools, investigated whether teachers' demographic characteristics, school-level factors (such as the proportion of non-white students and percentage of students receiving subsidized lunch), and school climate factors were significantly related to teacher victimization. The findings suggest

that teachers in schools with a higher percentage of minority student enrollment and/or a greater number of students eligible for free or reduced-price lunch are at increased risk of threats and/or physical assault. However, teachers who report higher levels of administrative support and rule enforcement within the school are less likely to be victims. Taken together these findings suggest that various factors at both individual and school-levels play significant roles in the occurrence of violence and aggression experienced by teachers at school.

The present research

The present research attempts to fill a void in the literature by investigating the effects of individual- and school-level factors in explaining the etiology of teacher victimization, especially focusing on aggression toward teachers via physical assault, sexual harassment, and theft/vandalism.

First, based on a review of extant empirical findings and theoretical guidance, five independent variables are examined and measured as indicators of individual-level opportunity on victimization. These are teachers' gender (as a measure of target gratifiability in certain offenses), sexual orientation (as a measure of target antagonism), teaching subjects (special education teacher vs. non-special education teacher), and teachers' classroom behaviors (e.g., helping toward students – target antagonism; teachers' uncertainty toward students – target vulnerability). It is hypothesized, for example, that female/transgender teachers are more likely to report victimization by sexual harassment, while special education teachers are more likely to be subjects of physical assault, compared to their counterparts in other subjects. Also, it is hypothesized that teachers who exhibit uncertainty toward students in classroom are more likely to be victimized, whereas teachers who exhibit helping/friendly approach toward students are less likely to experience victimization by students.

Second, five environmental factors are measured to investigate the effects of school-level proximity to potentially problematic student populations and school-level guardianship on teacher victimization. School level (middle school vs. high school), the proportion of disadvantaged students (measured by the percentage of student with reduced priced lunches), student disengagement, and school safety problems are included to assess teachers' proximity to potentially problematic student populations. School policies/programs on teacher victimization are included as a measure of school-level guardianship. The study hypothesizes that teachers in middle schools, schools with a higher proportion of disadvantaged student population, schools with higher levels of student disengagement, or schools with more safety problems are more likely than their counterparts to be victimized via physical assault, sexual harassment, and/or theft/vandalism by students. However, it is hypothesized that teachers in schools with policies/programs addressing teacher victimization are less likely to report experiencing such incidents.

Materials and Methods

Sample

Data are from a two-wave longitudinal survey project funded by the National Institute of Justice. Middle and high school teachers from the 50 largest school districts across the United States were surveyed for several reasons. Large public-school districts represent many regions of the country, but mainly in the sunbelt, which has seen substantial growth in student and teacher population in recent decades. Second, they are coterminous with major U.S. cities (Chicago, Dallas, Miami, New York City) and have racially, culturally, and economically diverse teacher and student populations. Also, the examination of these school districts indicates that they have middle and high schools with a mixture of academically high- and low-performing schools.

Finally, safety is a major concern in urban school districts where teacher turnover is also a serious problem (Carver-Thomas & Darling-Hammond, 2017). Additionally, Martinez et al. (2016) found that teachers at urban schools are more likely to report multiple victimizations.

A multistage stratified sampling design was used in Spring 2022 to select a random sample of middle and high school teachers from among the 50 largest school districts. First, the middle and high schools in each of the 50 largest schools were enumerated[1]. These schools were categorized into 9 groups based on the percentage of student eligibility for free or reduced-price lunch and academic performance. Depending on the number of schools in each group, approximately 10 to 130 schools (including replacement schools) were randomly selected. Second, the names and email addresses of all teachers among randomly selected schools were collected from publicly available school/teacher websites or provided by school districts.

Overall, the research team emailed an invitation letter with a personalized link to the survey to 38,498 middle and high school teachers. To encourage and compensate the time and effort involved for the teacher participation outside of their working hours, participants received an e-gift card ($20) via a private party upon completion of the survey at wave I. The survey took approximately 20-30 minutes to complete, and the data collection period lasted approximately 3 months between April and June 2022.

A total of 4,005 teachers from 609 middle, high, and middle/high schools participated in the first wave, with more than 94% completing the entire questionnaire. The response rate at Wave I was 10.4% and we speculate that this is a very conservative estimate since receipt of email may be systematically blocked by school firewalls and ineligible retired teachers' names and emails may not be properly updated on websites. In spring 2023, 2,708 of 4,005 Wave I research participants (68%) completed a Wave II survey. Of 2,708 teachers, there were 168

former teachers at the time of the Wave II survey and they were excluded from the present analyses. Also, this study focuses only on teacher participants who stayed in the same school in both Wave I and II. The analytic sample is 2,266.

Measures

Dependent variables

At Wave II, teachers were asked about their experiences of various types of victimization by students at school during the 12 months preceding the web-based survey. The present research specifically focused on three forms of teacher victimization: physical assault, sexual harassment, and theft/vandalism. For physical assault, participating teachers were asked whether they had been attacked, assaulted with a weapon, and/or punched by students at school. Sexual harassment victimization was measured by asking participants about their experiences of unwanted touching, name-calling with sexual epithets, and/or obscene gestures by students at school. Regarding theft/vandalism, participants were asked if they had experienced incidents of thefts or vandalism of personal property, such as a car, money, or smartphone, at school. At Wave II 10 percent reported an assault, 11 percent experienced sexual harassment, and 27 percent of the participants reported being victims of theft/vandalism at school.

Independent variables *<<Table 1 About here>>*

All independent variables at both the individual and school-levels were measured in Wave I to establish causal order. For target gratifiability and antagonism, teachers' gender/sexual orientation, teaching subjects, and teachers' classroom behaviors were measured. Teachers' gender/sexual orientation is categorized as male, female, and transgender/binary/other, with male being used as the reference group. Teaching subject is grouped into math/science subject, special education, English/social subjects, physical education, technical education, foreign

language, art/music, and multiple subjects. A teachers' helping/friendly behavior index (Cronbach's alpha = .76) as a measurement of target antagonism was created by summing 4 items (e.g., I help students with their work, I am friendly). This index variable measures teachers' interest in students and their willingness to assist them academically or in other ways and was coded so that a higher score indicates more teacher-friendly behaviors. Teachers' uncertain behavior index (Cronbach's alpha = .60) as a measure of target vulnerability was created by combining 4 items (e.g., I am uncertain, I am hesitant, I let students boss me around). It measures teachers' indecisive or hesitant actions in dealing with students in the classroom and was coded so that a higher score indicates higher levels of teachers' uncertain behaviors toward students.

At the school level, four risk factors associated with proximity to potentially problematic student populations are measured. Grade levels are categorized into middle school, high school, and middle/high mixed school, with high school being used as a reference. The proportion of disadvantaged student population is measured by the percentage of students receiving reduced-priced or free lunches. The measure of perceived student disengagement was constructed based on the teacher responses to the three survey items (4-point Likert scale from "not a problem" to "serious problem") about student problems in their school during the last 12 months: "student tardiness", "student absenteeism," and "students dropping out." The calculated Cronbach alpha is 0.76 and the factor loadings ranged from 0.75 to 0.89. The measure of perceived school safety problems was created based on the teacher responses to the four survey items (4-point Likert scale from "not a problem" to "serious problem") about safety issues in their school during the last 12 months: "gang-related issues," "students bringing weapons (e.g., gun, knife) to school,"

"students fighting," and "students using drugs and/or alcohol." The calculated Cronbach alpha is 0.81 and the factor loadings ranged from 0.75 to 0.83.

For the school-level guardianship, the composite score of perceived school violence prevention policies was calculated by summing up and standardizing the six teacher survey items (binary; yes vs. no) about school policy in prevention and responses to students' aggression toward teachers during the last 12 months (e.g., "my school has intervention programs to respond to students' violence against teachers," "my school administrators encourage victimized teachers to report their victimization").

Control Variables

Three socio-demographic characteristics of teachers were included as control variables including race/ethnicity, level of education, and years of teaching experience. Teachers' race/ethnicity was categorized as White, Hispanic, Black, Asian, and Other, with White as the reference group. The level of education was coded as a dummy variable, with "1" indicating a teacher with a master's degree or higher and "0" indicating a teacher with a bachelor's degree. The years of teaching experience was coded as a continuous variable, where a higher value indicates more years of teaching experience. Additionally, prior victimization at Wave I was included in each model to better understand the distinct effects of individual- and school-level risk factors on teacher victimization at Wave II.

Analytic Strategy

We employed a series of block-entry hierarchical regression models to quantify the extent to which three different types of violence directed against teachers by students (i.e., physical assault, sexual harassment, and theft/vandalism) can be explained by (a) individual risk factors, including teacher demographics, professional backgrounds, and teacher-student interactions, (b)

school risk factors, including school characteristics and teacher perceptions of school environment. Given the binary dependent variables and the hierarchical structure of teachers nested within schools, we estimated multilevel mixed-effects logistic regression (MMELR) models. Taking advantage of our longitudinal data that surveyed and measured teachers' victimization incidents for more than one time point, our MMELR models, computed using STATA 18.0SE, included the lagged dependent variable of each type of teacher victimization assessed in the prior year. The inclusion of the lagged dependent variable can account for unobserved teacher and school factors that correlated with both predictors and a given type of victimization, reducing estimation biases to a greater extent. All variance inflation factors (VIF) were below 2.50, with an average VIF of 1.48 for each of the three estimated full models.

RESULTS

Predicting Physical Assault ***<<Table 2 About Here>>***

Table 2 shows odds ratio (OR) estimates and 95% confidence intervals (CIs) from MMELR models predicting physical assault by a student. Model 1 includes only teacher demographics, professional backgrounds, and teacher-student interactions as predictors. The MMELR results indicate that non-Hispanic Black (OR = 1.60, 95% CI = 1.04, 2.44) and other race (OR = 2.51, 95% CI = 1.37, 4.63) teachers were more likely to experience physical assault, compared with their White peers. Special education teachers also reported higher odds of being physically assaulted by a student (OR = 1.97, 95% CI = 1.16, 3.34). As expected, teachers who reported being physically assaulted by a student in the prior year were more likely to experience physical assaulted by a student in the following year (OR = 5.88, 95% CI = 3.94, 8.78).

Model 2 introduces school characteristics and teacher perceptions of school environment as predictors, while controlling for teacher measures included in Model 1. The MMELR results

suggest that middle school teachers (OR = 1.70, 95% CI = 1.17, 2.46) were more likely to experience physical assault by a student, compared with their high school counterparts. The more low-income students there were in a school, the more likely it was that teachers in that school reported experiencing physical assault by a student (OR = 1.01, 95% CI = 1.00, 1.01). Teachers who perceived higher levels of school safety problems were more likely to report being physically assaulted by a student (OR = 1.58, 95% CI = 1.31, 1.92). Teachers who were more aware of various school policies in preventing and responding to students' aggression toward teachers were less likely to report experiencing physical assault by a student (OR = .82, 95% CI = .70, .96).

Predicting Sexual Harassment <<Table 3 About Here>>

Table 3 reports OR estimates and 95% CIs from MMELR models predicting sexual harassment by students. Results from Model 1 show that several indicators of teacher demographics and professional backgrounds are predictive of being sexually harassed by a student. Specifically, female teachers (OR = 1.48, 95% CI = 1.05, 2.07) were more likely to experience sexual harassment by a student, compared with their male peers. The odds of reporting sexual harassment by a student were lower for non-Hispanic Black teachers (OR = .58, 95% CI = .35, .97) than their White counterparts. The more years of teaching experience a teacher had, the less likely the teacher reported being sexually assaulted by a student. Not surprisingly, teachers who experienced sexual harassment by a student in the previous year reported higher odds of experiencing sexual harassment by a student in the subsequent year (OR = 8.85, 95% CI = 6.43, 12.19).

Results from Model 2 in Table 3 indicate that several measures of school characteristics and teacher perceptions of school environment were associated with sexual harassment by a

student. Middle school teachers (OR = 1.73, 95% CI = 1.22, 2.45) were more likely to report experiencing sexual harassment, compared with their high school peers. Like the results in predicting physical assault, teachers who perceived a higher level of school safety problems were more likely to report being sexually harassed by a student (OR = 1.24, 95% CI = 1.03, 1.50). Teachers who were more aware of various school policies in preventing and responding to students' aggression toward teachers were less likely to report experiencing sexual harassment (OR = .84, 95% CI = .72, .98).

Predicting Theft/Vandalism <<Table 4 About Here>>

Table 4 displays OR estimates and 95% CIs from MMELR models predicting theft/vandalism by students. Results from Model 1 show that teachers who identified their gender identity as transgender or non-binary (OR = 3.45, 95% CI = 1.02, 11.7) were more likely to experience theft/vandalism, compared with their male counterparts. Non-Hispanic Black teachers reported lower odds of experiencing theft/vandalism (OR = .54, 95% CI = .37, .78) than their White peers. Teachers who taught math/science (OR = 1.66, 95% CI = 1.14, 2.41) and arts/music (OR = 2.32, 95% CI = 1.44, 3.74) were more likely to experience theft/vandalism. Moreover, teachers who reported a higher level of uncertainty when interacting with students in a classroom were more likely to experience theft/vandalism (OR = 1.16, 95% CI = 1.03, 1.30). As expected, teachers who experienced theft/vandalism by a student in the prior year reported higher odds of experiencing theft/vandalism in the current year (OR = 6.13, 95% CI = 4.83, 7.77).

Similar to the results in predicting physical assault and sexual harassment by a student, results from Model 2 in Table 4 suggest that middle school teachers (OR = 2.17, 95% CI = 1.64, 2.86) were more likely to experience theft/vandalism, compared with their high school counterparts, whereas teachers indicating greater awareness of policies in preventing and

responding to teacher victimization were less likely to experience theft/vandalism (OR = .79, 95% CI = .71, .89). Further, as the percentage of students in poverty increased, the more likely teachers in that school reported experiencing theft/vandalism (OR = 1.01, 95% CI = 1.00, 1.01).

DISCUSSION

The present study, using a random sample of 2,266 teachers, surveyed across two waves of data collection, from among the 50 largest school districts across the nation to explore the extent of teacher victimization via physical assault, sexual harassment, and theft/vandalism. Consistent with previous research, we found a significant incidence of violence and aggression directed toward teachers by students within educational institutions. Approximately 1 out of 10 teachers in the sample reported a physical assault and sexual harassment victimization respectively in the 12 months prior to the survey, while more than a quarter of the sample reported incidents of theft/vandalism victimization.

This work investigated the risk factors of teacher victimization using opportunity theories as a theoretical framework. In terms of target gratifiability, the findings indicate a significant relationship between male and female teachers in the prevalence of victimization via sexual harassment in the model featuring no school risk factors, but this effect is not significant in the full model predicting sexual harassment. The significant result is consistent with previous research on sexual harassment victimization, involving samples of military personnel, university employees, and athletes (see Leahy, Pretty, & Tenenbaum, 2002; Richman et al., 1999). We would also note that the increased risk for transgender and non-binary teachers is evident, in terms of direction of increased risk, in five of the models, but due to the small number of respondents there is limited statistical power and statistical significance is lacking. This is more

due to a wide confidence interval than to a small coefficient suggesting further research in this area.

Regarding the effect of teaching subject on teacher victimization, the findings show that special education teachers, compared to their counterparts teaching general subjects, are nearly twice as likely to report instances of physical assault victimization by students compared to their peers. These results are consistent with prior research (see Huang et al., 2020; Moon & McCluskey, 2020; Tiesman et al., 2013), primarily because special education teachers predominantly work with students needing a higher intensity of care, attention, and contact.

With regard to teacher characteristics, our results demonstrate that teachers who exhibited uncertain behaviors in their interactions with students within the classroom are more likely to experience victimization via theft/vandalism. While personal victimizations of assault and harassment show similar increase in risk associated with uncertainty, in both cases that result cannot be statistically distinguished from the null effect. While further research is needed for a more complete understanding, these findings suggest the importance of providing teachers with classroom management training. Such training can empower teachers to enhance their effectiveness in interacting with students and consequently reduce the likelihood of experiencing victimization by students at school. It is critical to stress that this recommendation is not intended to blame, but rather aims to understand how to prevent teacher victimization.

School climate and context, as compared to teacher characteristics, contributes a relatively consistent picture of risk for the three types of victimization. For example, the relationship between school level and teacher victimization consistently indicates that teachers working in middle schools are more likely to report a higher prevalence of victimization via physical assault, sexual harassment, and theft/vandalism, compared to their counterparts in high

schools, consistent with prior studies (Chen & Astor, 2009; Moon & McCluskey, 2016). Three environmental or contextual risks show similar patterns as anticipated in terms of risk to teachers across most or all the models estimated. First, risks of assault and theft are elevated for teachers working in schools with a greater percentage of students on free or reduced lunches. That environmental measure's impact on sexual harassment, however, is not distinguishable from zero in our models. Those teachers who report greater levels of safety problems within the school environment are at an increased risk of experiencing personal victimizations of assault and sexual harassment, but not theft. Similarly, teachers reporting greater awareness of prevention policies reported significantly less victimization, and this finding holds across types studied here.

Although used as control variables, the current findings show that teachers' year of teaching, race/ethnicity, and prior victimization are significantly related to teacher victimization. The result reveals a significant positive relationship between the number of years of teaching experience and victimization through assault, but no significant effect in the full models for assault theft/vandalism. In other words, there is little consistent pattern regarding teachers with more extensive teaching experience having a different likelihood of experiencing victimization by students in schools. It is plausible that experienced teachers are more likely to possess the knowledge and skills required to effectively deal with students and to take greater precautions in preventing instances of victimization, which may be reflected in other variables in the model such as safety problems and student disengagement, for example. Interestingly, black teachers, when compared with white counterparts, show significantly different risks across the three victimization types. Black teachers are half as likely to report being the victim of theft or sexual harassment in the prior year, holding constant all the other effects in the models. Conversely, they are about 30% more likely to report an assault victimization compared to white teachers.

This is the only teacher characteristic or risk factor, at the individual level, that is a predictor (albeit in opposite directions depending on victimization) in all the models estimated. Finally, the continuities of teacher risk are reflected in stability and magnitude of Wave 1 victimization experience coefficients on Wave 2 victimization experiences. Put simply this reflects repetitive, year-over-year victimization patterns that persist. Further exploration of trajectories of victimization are suggested by these findings (see e.g., Moon, Kim, and McCluskey 2023).

In summary, *who teachers are* does not seem to yield a consistent picture of risk for victimization as measured here. Given the theoretical framework on target congruence, suggesting interactions between characteristics and types of victimization, our findings regarding female teachers increased risk for sexual harassment reflects that reality. Similarly non-binary and transgender status, though not statistically significant, have substantively large coefficients that the theory would predict. Nevertheless, the inconsistency in patterns across teachers' personal characteristics likely offers little foothold for coherent policy creation. School risk factors however, or *where teachers are*, does generate a more robust set of predictors and that pattern is one which has a strong consistency across the three types of victimization. As such, that will be the focus of the policy implications that follow.

Policy Implications

Overall, the findings regarding risk environment and school context are consistent with prior studies (see Gregory et al., 2012; Huang et al., 2020), highlighting the potential pivotal role that school administrators can play in preventing and reducing teacher victimization. School administrators can, for example, offer administrative support to teachers and this support can reduce teachers' uncertainty and some forms of victimization, in turn. Additionally, ensuring the teachers work in an environment that they consider safe and have awareness of school policies

for prevention of teacher victimization is paramount. Teachers' perceptions of school safety and prevention efforts are significantly related to teacher victimization in the expected directions, suggesting a viable avenue for systematic approaches to improving school safety consistent with opportunity theory rooted in the communication of capable guardianship.

McMahon et al. (2024) have surveyed a large number of teachers, administrators and staff to capture victimization of teachers, staff, and administrators before and after COVID. Their findings suggest that the management of risk is apparent in the concerns their respondents expressed post COVID. A majority endorsed behavioral management, threat assessment, and staff team building as training needs/responses to teacher victimization. These suggest a mixture of individual skill building as well as environmental/contextual approaches to risk mitigation. The analyses conducted here, with a consistent correlation of policy awareness and lowered risk of victimization suggests that, among the latter, environmental/contextual approaches are a feasible avenue for risk reduction. Specifically, self-reports of assaults, harassment and theft are all attenuated by teacher awareness of teacher victimization policies (and the existence thereof) in the school. Further research, perhaps using identified samples of administrators, will be important for understanding what mechanisms are involved with the policy-risk reduction linkage.

Limitations

We acknowledge several limitations in the present study. First, the study's sample, consisting of middle and high school teachers among 50 largest school districts, does not represent the broader population of teachers from across the United States, especially in rural settings. Second, the use of teachers as informants regarding some school features and climate including student disengagement, safety problems, and prevention problems suffers from a shared method bias that

may inflate observed correlations. As such this necessitates a cautious approach when interpreting causal relationships between these key independent and dependent variables.

A third limitation of the research is that we do not distinguish between chronic and single-event incidents that teachers experienced in any of the three victimizations examined. Put differently, some researchers have drawn on ordinal measures of victimization (e.g., McMahon et al. 2024) to distinguish between those suffering daily, weekly, or monthly victimization and those suffering transient or no victimizations. Our research has focused on distinguishing victims and non-victims as reflected in the binary outcomes studied herein.

Finally, the initial survey response rate could be raised as an issue. Post-COVID, however, response levels such as those obtained here are the norm and given the large sample the random sample selection maintains its utility for generating statistical inference. A prior study conducted by Fosnacht et al. (2017), analyzing the data from the National Survey of Student Engagement, found that research with a response rate of 5% to 10% with a large sample size (at least 500 participants) produces reliable estimates (see also Wu, Zhao, & Fils-Aime, 2022).

Conclusion and Future research

Violence, harassment, and other forms of teacher victimization represent a growing concern within K-12 education and among teachers and the public. The current research suggests that this annual risk among teachers in large U.S public school districts, drawn from a contemporary, post-COVID random sample, is substantial across assault, harassment, and theft. The longitudinal data analyzed here offers unique insights into school-level approaches to enhancing safety for teachers both through policy and action. The former is reflected in the consistency of policy awareness as a protective factor against risk. The latter is evidenced by the perception of a lack of safety as a positive correlate of victimization within the sample analyzed.

Future research, in our judgment, has at least two major facets that should be addressed. First, surveys of administrators should be launched to ascertain their experiences in handling victimization and the challenges and resources they face in confronting this problem. Such research could, for example, become the strong basis for a training program aimed at principals and superintendents. Second, we would encourage longer term commitments to the study of teachers in a panel design to determine the causes and consequences of chronic victimization among teachers. Such research could, for example, draw on a cohort of newly hired teachers to determine the role environment, safety, and school responses play in early career teachers maintaining their link to the profession.

References

Astor, R. A., Benbenishty, R., Capp, G. P., Watson, K. R., Wu, C., McMahon, S. D., Worrell, F. C., Reddy, L. A., Martinez, A., Espelage, D. L., & Anderman, E. M. (2024). How school policies, strategies, and relational factors contribute to teacher victimization and school safety. *Journal of Community Psychology*, 52, 39–57. https://doi.org/10.1002/jcop.23084

Burrow, J. D., & Apel, R. (2008). Youth behavior, school structure, and student risk of victimization. Justice Quarterly, 25, 349–380. doi:10.1080/07418820802025181

Carver-Thomas, D., & Darling-Hammond, L. (2017). Teacher turnover: Why it matters and what we can do about it. *Learning Policy Institute*.

Chen, J.-K., & Astor, R. A. (2009). Students' reports of violence against teachers in Taiwanese schools. *Journal of School Violence, 8*(1), 2-17. https://doi.org/10.1080/15388220802067680

Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A Routine activity approach. American Sociological Review, 44, 588–608. doi:10.2307/2094589

Edwards, K. M., & Neal, A. M. (2017). School and community characteristics related to dating violence victimization among high school youth. *Psychology of Violence, 7*(2), 203-212. https://doi.org/10.1037/vio0000065

Espelage, D., Anderman, E., Brown, V. Jones, A., Lane, K., McMahon, S.D., Reddy, L.A., Reynolds, C.R. (2013). Understanding and preventing violence directed against teachers: Recommendations for a national research, practice and policy agenda. *American Psychologist*, 68, 75-87. https://doi.org/10.1037/a0031307

Finkelhor, D., & Asdigian, N. L. (1996). Risk factors for youth victimization: Beyond a lifestyles/routine activities theory approach. *Violence and victims*, *11*, 3-19.

Fisher, B. S., Sloan, J. J., Cullen, F. T., & Lu, C. (1998). Crime in the ivory tower: The level and sources of student victimization. Criminology, 36, 671–710. doi:10.1111/crim.1998.36.issue-3

Fosnacht, K., Sarraf, S., Howe, E., & Peck, L. K. (2017). How important are high response rates for college surveys?. *The Review of Higher Education*, *40*(2), 245-265.

Gregory, A., Cornell, D., & Fan, X. (2012). Teacher safety and authoritative school climate in high schools. *American Journal of Education*, *118*(4), 401-425. https://doi.org/10.1086/666362

Huang, F. L., Eddy, C. L., & Camp, E. (2020). The role of the perceptions of school climate and teacher victimization by students. *Journal of interpersonal violence*, *35*(23-24), 5526-5551. DOI: 10.1177/0886260517721898

Lauritsen, J. L., & Carbone-Lopez, K. (2011). Gender differences in risk factors for violent victimization: An examination of individual-, family-, and community-level predictors. *Journal of Research in Crime and Delinquency*, *48*(4), 538-565. https://doi.org/10.1177/0022427810395356

Leahy, T, Pretty, G., & Tenenbaum, G. (2002). Prevalence of sexual abuse in organized competitive sport in Australia. *Journal of Sexual Aggression, 8*, 16-36. https://doi.org/10.1080/13552600208413337

Longobardi, C., Badenes-Ribera, L., Fabris, M. A., Martinez, A., & McMahon, S. D. (2019). Prevalence of student violence against teachers: A meta-analysis. *Psychology of Violence*, *9*(6), 596-610. https://doi.org/10.1037/vio0000202

Lynch, J. P., & Cantor, D. (1992). Ecological and behavioral influences on property victimization at home: Implications for opportunity theory. *Journal of Research in Crime and Delinquency, 29*(3), 335-362. https://doi.org/10.1177/0022427892029003005

Martinez, A., McMahon, S. D., Espelage, D., Anderman, E. M., Reddy, L. A., & Sanchez, B. (2016). Teachers' experiences with multiple victimization: Identifying demographic, cognitive, and contextual correlates. *Journal of school violence, 15*(4), 387-405. https://doi.org/10.1080/15388220.2015.1056879

McMahon, S. D., Anderman, E. M., Astor, R. A., Espelage, D. L., Martinez, A., Reddy, L. A., & Worrell, F. C. (2022). Violence against educators and school personnel: Crisis during COVID. Technical report. American Psychological Association

McMahon, S.D., Worrell, F.C., Reddy, L.A., Martinez, A., Espelage, D.L., Astor, R.A., Anderman, E.M., Valido, A., Swenski, T., Perry, A.H. & Dudek, C.M. (2024). Violence and aggression against educators and school personnel, retention, stress, and training needs: National survey results. *American Psychologist*.

Miethe, T. D., & McDowell, D. (1993). Contextual effects in models of criminal victimization. Social Forces, 71, 741–759. doi:10.2307/2579893

Moon, B., Kim, J., & McCluskey, J. (2023). Teacher victimization patterns establishing a group-based trajectory approach to assessing predictors of connectedness to school, job satisfaction, and depression. *Victims & Offenders*, *18*(4), 607-622. https://doi.org/10.1080/15564886.2021.2014007

Moon, B., & McCluskey, J. (2016). School-based victimization of teachers in Korea: Focusing on individual and school characteristics. *Journal of interpersonal violence, 31*(7), 1340-1361. DOI: 10.1177/0886260514564156

Moon, B., & McCluskey, J. (2020). An exploratory study of violence and aggression against teachers in middle and high schools: Prevalence, predictors, and negative consequences. *Journal of School Violence, 19*(2), 122-137. https://doi.org/10.1080/15388220.2018.1540010

Moon, B., McCluskey, J. & Saw, Guan (2023). Teacher victimization and negative consequences: Evidence from teachers among the 50 largest school districts. Academy of Criminal Justice Sciences 2023 Conference, National Harbor, MD, United States

Moon, B., Morash, M., June Oh, J., & Seokjin, J. (2015). Violence against teachers in South Korea: Negative consequences and factors leading to emotional distress. *Violence & Victims, 30*(2), 279-292. doi:10.1891/0886-6708.VV-D-13-00184

Moon, B., Morash, M., & McCluskey, J. (2021). Student violence directed against teachers: Victimized teachers' reports to school officials and satisfaction with school responses. *Journal of interpersonal violence*, *36*(13-14), NP7264-NP7283. DOI: 10.1177/0886260519825883

Mustaine, E. E., & Tewksbury, R. (1998). Predicting risks of larceny theft victimization: A routine activity analysis using refined lifestyle measures. Criminology, 36, 829–858. doi:10.1111/ crim.1998.36.issue-4

Mustaine, E. E., & Tewksbury, R. (2002). Sexual assault of college women: A feminist interpretation of a routine activities analysis. Criminal Justice Review, 27, 8 9–123. doi:10.1177/ 073401680202700106

O, S., & Wilcox, P. (2018). Routine activity theory, Target congruence, and school context: A multilevel analysis of teacher victimization. *Victims & Offenders*, *13*, 349-372. https://doi.org/10.1080/15564886.2017.1329174

Peguero, A. A. (2009). Opportunity, involvement, and student exposure to school violence. Juvenile Justice, 7, 299–312. doi:10.1177/1541204008330634

Peist, E., McMahon, S. D., Davis-Wright, J. O., & Keys, C. B. (2024). Understanding teacher-directed violence and related turnover through a school climate framework. *Psychology in the Schools*, 61, 220–236. https://doi.org/10.1002/pits.23044

Reddy, L. A., Martinez, A., Perry, A. H., McMahon, S. D., Espelage, D. L., Anderman, E. M., Astor, R. A., & Worrell, F. C. (2023). Violence directed against teachers during the COVID-19 pandemic: A social–ecological analysis of safety and well-being. *School Psychology.* Advance online publication. https://doi.org/10.1037/spq0000562

Richman, J. A., Rospenda, K. M., Nawyn, S. J., Flaherty, J. A., Fendrich, M., Drum, M. L., & Johnson, T. P. (1999). Sexual harassment and generalized workplace abuse among university employees: prevalence and mental health correlates. *American Journal of Public Health,* 89,358-363. DOI: 10.2105/ajph.89.3.358

Roh, S., Kim, E., & Yun, M. (2010). Criminal victimization in South Korea: A multilevel approach. *Journal of Criminal Justice*, *38*(3), 301-310. https://doi.org/10.1016/j.jcrimjus.2010.03.004

Rountree, P. W., Land, K. C., & Miethe, T. D. (1994). Macro-micro integration in the study of 4 victimization: A hierarchical logistic model analysis across Seattle neighborhoods. *Criminology, 32*(3), 387. doi:https://doi.org/10.1111/j.1745-9125.1994.tb01159.x

Sampson, R. J., & Wooldredge, J. D. (1987). Linking the micro-and macro-level dimensions of lifestyle-routine activity and opportunity models of predatory victimization. *Journal of quantitative criminology*, *3*, 371-393.

Schreck, C. J., & Fisher, B. S. (2004). Specifying the influence of family and peers on violent victimization extending routine activities and lifestyles theories. Journal of Interpersonal Violence, 19, 1021–1041. doi:10.1177/0886260504268002

Sween, M., & Reyns, B. W. (2017). An empirical test of target congruence theory on intimate partner violence. *Deviant Behavior*, *38*(1), 61-73. https://doi.org/10.1080/01639625.2016.1191914

Tiesman, H., Konda, S., Hendricks, S., Mercer, D., & Amandus, H. (2013). Workplace violence among Pennsylvania education workers: Differences among occupations. *Journal of Safety Research, 44*, 65-71. https://doi.org/10.1016/j.jsr.2012.09.006

Tillyer, M. S. (2015). General multilevel opportunity and crime events. *Journal of Contemporary Criminal Justice*, *31*(1), 107-121. https://doi.org/10.1177/1043986214552621

Tillyer, M. S., Fisher, B. S., & Wilcox, P. (2011). The effects of school crime prevention on students' violent victimization, risk perception, and fear of crime: A multilevel opportunity perspective. Justice Quarterly, 28, 249–277. doi:10.1080/07418825.2010.493526

Tillyer, M. S., Wilcox, P., & Gialopsos, B. M. (2010). Adolescent school-based sexual victimization: Exploring the role of opportunity in a gender-specific multilevel analysis. *Journal of Criminal Justice*, *38*(5), 1071-1081. https://doi.org/10.1016/j.jcrimjus.2010.07.010

Wei, C., Gerberich, S. G., Alexander, B. H., Ryan, A. D., Nachreiner, N. M., & Mongin, S. J. (2013). Work-related violence against educators in Minnesota: Rates and risks based on hours exposed. *Journal of Safety Research, 44*, 73-85. DOI: 10.1016/j.jsr.2012.12.005

Wilcox, P., Land, K. C., & Hunt, S. A. (2003). Criminal circumstance: A dynamic multi-contextual criminal opportunity theory. Piscataway, NJ: Transaction.

Wilcox, P., Madensen, T.D., & Tillyer, M. S. (2007). Guardianship in context: Implications for burglary victimization risk and prevention. Criminology, 45, 771–803. doi:10.1111/j.17459125.2007.00094.x.

Wu, M. (2022). J, Zhao K, Fils-Aime F. Response rates of online surveys in published research: A meta-analysis. *Computers in Human Behavior Reports*, *7*, 100206. https://doi.org/10.1016/j.chbr.2022.100206

Zavala, E., & Guadalupe-Diaz, X. (2019). Testing target congruence theory on emotional abuse victimization experienced by heterosexual and LGBQ college students. *Journal of Aggression, Maltreatment & Trauma*, *28*(9), 1069-1090. https://doi.org/10.1080/10926771.2018.1430641

Table 1. Descriptive statistics

	Percent or Mean	Standard Deviation
Teacher Victimization (Wave 2)		
Physical assault	10.36%	
Sexual harassment	11.17%	
Theft/vandalism	26.98%	
Prior Teacher Victimization (Wave 1)		
Physical assault	8.08%	
Sexual harassment	11.21%	
Theft/vandalism	22.64%	
Individual Risk Factors		
Demographic Characteristics		
Female	67.38%	
Male	31.99%	
Transgender/Non-binary	0.62%	
White	65.89%	
Black	12.97%	
Hispanic/Latine	11.69%	
Asian	5.38%	
Other race	4.15%	
Professional Backgrounds		
Advanced degree	67.00%	
Years of teaching experience	13.32	8.98
Special education	13.77%	
Math/Science subject	32.03%	
English/Social studies	36.67%	
Physical education	3.18%	
Technical education/Other	14.87%	
Foreign language/ESL	27.41%	
Arts/Music	7.55%	
Multiple subject	15.75%	
Teacher-Student Interactions		
Uncertain	0	1
Friendly	0	1
School Risk Factors		
School Characteristics		
High School	58.91%	
Middle school	35.75%	
Middle-high school	5.34%	
School size	1531.00	872.02
% of free/reduced-lunch students	55.88	27.01
Teacher Perceptions		
Student disengagement	0	1
Safety problems	0	1
Prevention policies	0	1

Note. *S*ample size = 2,266.

Table 2. Multilevel mixed-effects logistic regressions predicting physical assault

	Model 1		Model 2	
	OR	95% CI	OR	95% CI
Individual Risk Factors				
Prior physical assault	5.88***	[3.94, 8.78]	4.26***	[2.86, 6.34]
Demographic Characteristics				
Female	.99	[.71, 1.38]	.83	[.59, 1.16]
Transgender/Non-binary	1.27	[.23, 6.90]	.96	[.18, 5.18]
Black	1.60*	[1.04, 2.44]	1.31	[.86, 2.02]
Hispanic/Latine	1.37	[.85, 2.20]	1.34	[.83, 2.14]
Asian	1.02	[.50, 2.08]	1.01	[.48, 2.10]
Other race	2.51**	[1.37, 4.63]	2.18*	[1.18, 4.02]
Professional Backgrounds				
Advanced degree	1.03	[.74, 1.43]	1.00	[.72, 1.39]
Years of teaching experience	1.01	[1.00, 1.03]	1.02*	[1.00, 1.04]
Special education	1.97*	[1.16, 3.34]	1.86*	[1.10, 3.15]
Math/Science subject	1.05	[.63, 1.75]	1.06	[.64, 1.75]
English/Social studies	1.21	[.72, 2.00]	1.20	[.73, 1.98]
Physical education	.92	[.37, 2.27]	.85	[.35, 2.06]
Technical education/Other	.75	[.41, 1.37]	.74	[.41, 1.35]
Foreign language/ESL	.98	[.63, 1.54]	.94	[.61, 1.47]
Arts/Music	.95	[.46, 1.96]	.88	[.43, 1.80]
Multiple subject	.87	[.46, 1.64]	.80	[.43, 1.52]
Teacher-Student Interactions				
Uncertain			1.05	[.89, 1.23]
Friendly			1.10	[.94, 1.29]
School Risk Factors				
School Characteristics				
Middle school			1.70**	[1.17, 2.46]
Middle-high school			1.05	[.50, 2.21]
School size (log transformed)			.76	[.57, 1.01]
% of free/reduced-lunch students			1.01*	[1.00, 1.01]
Teacher Perceptions				
Student disengagement			.85	[.70, 1.04]
Safety problems			1.58***	[1.31, 1.92]
Prevention policies			.82*	[.70, .96]

Note. Sample size = 2,259. OR = odds ratio; % = percent; CI = confidence interval; ESL: English as a Second Language.

*$p < .05$.

**$p < .01$.

***$p < .001$ (two-tailed test).

Table 3. Multilevel mixed-effects logistic regressions predicting sexual harassment

	Model 1		Model 2	
	OR	95% CI	OR	95% CI
Individual Risk Factors				
Prior sexual harassment	8.85***	[6.43, 12.19]	7.00***	[5.05, 9.69]
Demographic Characteristics				
Female	1.48*	[1.05, 2.07]	1.33	[.95, 1.88]
Transgender/Non-binary	3.74	[.99, 14.16]	2.94	[.79, 11.02]
Black	.58*	[.35, .97]	.54*	[.32, .91]
Hispanic/Latine	1.06	[.68, 1.65]	1.10	[.70, 1.73]
Asian	1.11	[.58, 2.10]	1.20	[.63, 2.30]
Other race	1.32	[.69, 2.50]	1.18	[.61, 2.27]
Professional Backgrounds				
Advanced degree	.88	[.64, 1.20]	.85	[.62, 1.17]
Years of teaching experience	.98*	[.96, 1.00]	.98	[.97, 1.00]
Special education	1.24	[.72, 2.11]	1.07	[.62, 1.82]
Math/Science subject	1.22	[.75, 1.99]	1.14	[.70, 1.86]
English/Social studies	1.27	[.79, 2.05]	1.19	[.74, 1.93]
Physical education	1.03	[.43, 2.45]	.88	[.37, 2.11]
Technical education/Other	1.65	[.96, 2.82]	1.60	[.94, 2.75]
Foreign language/ESL	1.07	[.70, 1.64]	1.08	[.70, 1.65]
Arts/Music	1.29	[.68, 2.45]	1.18	[.62, 2.23]
Multiple subject	.97	[.54, 1.72]	1.02	[.58, 1.81]
Teacher-Student Interactions				
Uncertain			1.16	[1.00, 1.35]
Friendly			1.01	[.87, 1.17]
School Risk Factors				
School Characteristics				
Middle school			1.73**	[1.22, 2.45]
Middle-high school			1.30	[.67, 2.53]
School size (log transformed)			.82	[.63, 1.07]
% of free/reduced-lunch students			1.00	[1.00, 1.01]
Teacher Perceptions				
Student disengagement			.89	[.74, 1.08]
Safety problems			1.24*	[1.03, 1.50]
Prevention policies			.84*	[.72, .98]

Note. Sample size = 2,259. OR = odds ratio; % = percent; CI = confidence interval; ESL: English as a Second Language.

*$p < .05$.

**$p < .01$.

***$p < .001$ (two-tailed test).

Table 4. Multilevel mixed-effects logistic regressions predicting theft/vandalism

	Model 1		Model 2	
	OR	95% CI	OR	95% CI
Individual Risk Factors				
Prior theft/vandalism	6.13***	[4.83, 7.77]	4.78***	[3.76, 6.06]
Demographic Characteristics				
Female	1.14	[.90, 1.44]	1.00	[.79, 1.27]
Transgender/Non-binary	3.45*	[1.02, 11.71]	2.51	[.75, 8.43]
Black	.54**	[.37, .78]	.46***	[.31, .67]
Hispanic/Latine	.77	[.54, 1.10]	.75	[.52, 1.07]
Asian	.75	[.46, 1.25]	.75	[.45, 1.25]
Other race	.77	[.45, 1.30]	.71	[.42, 1.21]
Professional Backgrounds				
Advanced degree	.93	[.74, 1.18]	.92	[.73, 1.16]
Years of teaching experience	1.00	[.98, 1.01]	1.00	[.99, 1.01]
Special education	.96	[.63, 1.46]	.90	[.60, 1.36]
Math/Science subject	1.66**	[1.14, 2.41]	1.64**	[1.13, 2.37]
English/Social studies	1.17	[.81, 1.70]	1.11	[.77, 1.61]
Physical education	1.25	[.64, 2.43]	1.10	[.57, 2.14]
Technical education/Other	1.59*	[1.05, 2.40]	1.64*	[1.09, 2.47]
Foreign language/ESL	1.11	[.79, 1.54]	1.13	[.82, 1.57]
Arts/Music	2.32**	[1.44, 3.74]	2.22**	[1.39, 3.56]
Multiple subject	.99	[.64, 1.52]	.98	[.64, 1.51]
Teacher-Student Interactions				
Uncertain			1.16*	[1.03, 1.30]
Friendly			.97	[.87, 1.09]
School Risk Factors				
School Characteristics				
Middle school			2.17***	[1.64, 2.86]
Middle-high school			1.62	[.98, 2.69]
School size (log transformed)			.98	[.79, 1.21]
% of free/reduced-lunch students			1.01**	[1.00, 1.01]
Teacher Perceptions				
Student disengagement			1.09	[.95, 1.26]
Safety problems			1.14	[.99, 1.31]
Prevention policies			.79***	[.71, .89]

Note. Sample size = 2,259. OR = odds ratio; % = percent; CI = confidence interval; ESL: English as a Second Language.

*$p < .05$.

**$p < .01$.

***$p < .001$ (two-tailed test).