

INDIVIDUAL, INSTITUTIONAL, AND COMMUNITY SOURCES OF SCHOOL VIOLENCE: A META-ANALYSIS

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PROJECT OVERVIEW

1. Organize the existing empirical knowledge base regarding school violence
2. Identify the key individual-, school-, and community-level factors that should be targeted for change and/or intervention to reduce school violence

STATEMENT OF THE PROBLEM

- School violence is of great concern to scholars, policymakers, and the public
- There are currently many pressures to enact policies that enhance school safety
- Creating effective, evidence-based policies would first require knowing what the sources (or “root causes”) of school violence are—but we do not yet know as much as we should

STATEMENT OF THE PROBLEM

- The lack of knowledge of the causes of violence in school is not due to a lack of studies on the subject
- Lack of effort to organize the knowledge that has been produced
- After decades of empirical research, it is important that we firmly determine what this literature shows are the important individual, institutional, and community-level sources of violence at school

THE IMPORTANCE OF META-ANALYSIS

- Allows for the calculation of precise estimates of the “effect size” of certain relationships
- Can also provide firm evidence about how the effect size of a certain relationship varies within a body of literature
- Can help us understand whether the strength of a given predictor is stronger or weaker for certain forms of school violence or victimization; and which predictors have “general effects” across various forms of school violence and victimization

PROJECT PURPOSE

- Determine the key individual-, school-, and community-level factors that are associated with aggression or violence at school
- Identify these sources for both perpetration and victimization

KEY RESEARCH QUESTIONS

1. What are the factors that are strong predictors of school violence perpetration *and* victimization?
2. What are the factors that are weak predictors of school violence perpetration and victimization?
3. Which factors appear to be uniquely linked to just school violence perpetration *or* victimization?

SAMPLE

- All quantitative studies on aggression, violence, and victimization occurring within K-12 schools, published up to January 2019, were eligible for inclusion
 - Only violence against students included
 - Only studies that assessed school violence at the individual level (not the school level)
 - Studies that did not specify whether perpetration or victimization occurred specifically while at school or on school grounds were excluded
 - Studies of victimization and perpetration that took place online, or against teachers, were excluded

SAMPLE

1. Electronic searches through seven online databases (Google Scholar, EBSCO, Wiley, Sage, Taylor & Francis, Springer, Science Direct)
 2. 100+ different peer-reviewed journals in education, psychology, sociology, social work, health, criminology, and youth development
 3. Reference lists of previously published reviews and meta-analyses
- Searched using various combinations of the following key phrases:
 - “school,” “student,” and “peer” which we linked with “violen*,” “victim*,” “bully*,” “aggress*,” “attack,” “shoot*,” “harm,” “crim*,” “offend*,” “delinquen*,” “threat*,” “fight*,” “hit,” “steal,” “intimidat*,” “safety,” and “weapon.”

SAMPLE

- Identified **4,136** studies that met initial screening criteria
 - Based on title, abstract, and general topic
 - Erred on the side of inclusion
- Studies were excluded for:
 - Not presenting any statistical associations
 - Not presenting a statistical association between any predictors of interest and school violence or victimization
 - Not specifying that violence occurred while *at school*
 - Not presenting enough information to calculate an effect size estimate

SAMPLE

- A total of 761 studies spanning over six decades
- 8,790 effect size estimates
 - 44.1% for school violence, aggression, and delinquency
 - 55.9% for school victimization
 - 63.7% middle and/or high school students
 - 76.4% based on self-reports of school violence/victimization
- Studies were based on samples from 72 different nations (56.1% U.S. samples)

SAMPLE

- A wide spectrum of violence, aggressive, and delinquent acts are captured:
 - Bullying perpetration (27.9%); Bullying victimization (33.4%)
 - Violent offending (6.6%); Violent victimization (11.1%)
 - Nonviolent offending (2.5%); Nonviolent victimization (5.9%)
 - General delinquency (2.7%); General interpersonal victimization (4.3%)
 - Bringing a weapon to school (4.4%)
 - Exposure to violence (1.1%)

INDIVIDUAL-LEVEL PREDICTOR DOMAINS

- Age
- Sex (male)
- Race (non-white)
- Socioeconomic status
- Self-control
- Antisocial attitudes
- Antisocial behavior
- Substance use
- Bonds to parents
- Bonds to school
- Academic achievement
- Extracurricular activities
- Risk avoidance
- Weapon carrying
- Victimization
- Peer rejection
- Popularity
- Social Competence
- LGBT identification
- Disability (learning or physical)

SCHOOL-LEVEL PREDICTOR DOMAINS

- Negative school climate
- Violent school context
- School disorder
- Urban school
- School size
- Security devices

COMMUNITY-LEVEL PREDICTOR DOMAINS

- Economic deprivation
- Community crime
- Community disorder

EFFECT SIZE ESTIMATE

- Bivariate and multivariate effect sizes included (r)
 - Correlation coefficients and standardized regression slopes
 - Used established conversion formulas (see Ousey & Kubrin, 2018; Pratt et al., 2014)
- Effect sizes can be interpreted as the change in the dependent variable (school violence) associated with a standard deviation change in each predictor domain
- Using Fisher's r to z transformation, effect sizes were converted into a $z(r)$ score

ANALYTIC STRATEGY

- Analyses carried out separately for school violence perpetration and for victimization
- Effect sizes, nested within studies
- Multilevel modeling to estimate mean effect sizes
 - “Variance-known” hierarchical linear models (Raudenbush & Bryk, 2002; Turanovic & Pratt, 2020)
 - Three-level models
 - Estimates are adjusted for differences between bivariate/multivariate effect sizes

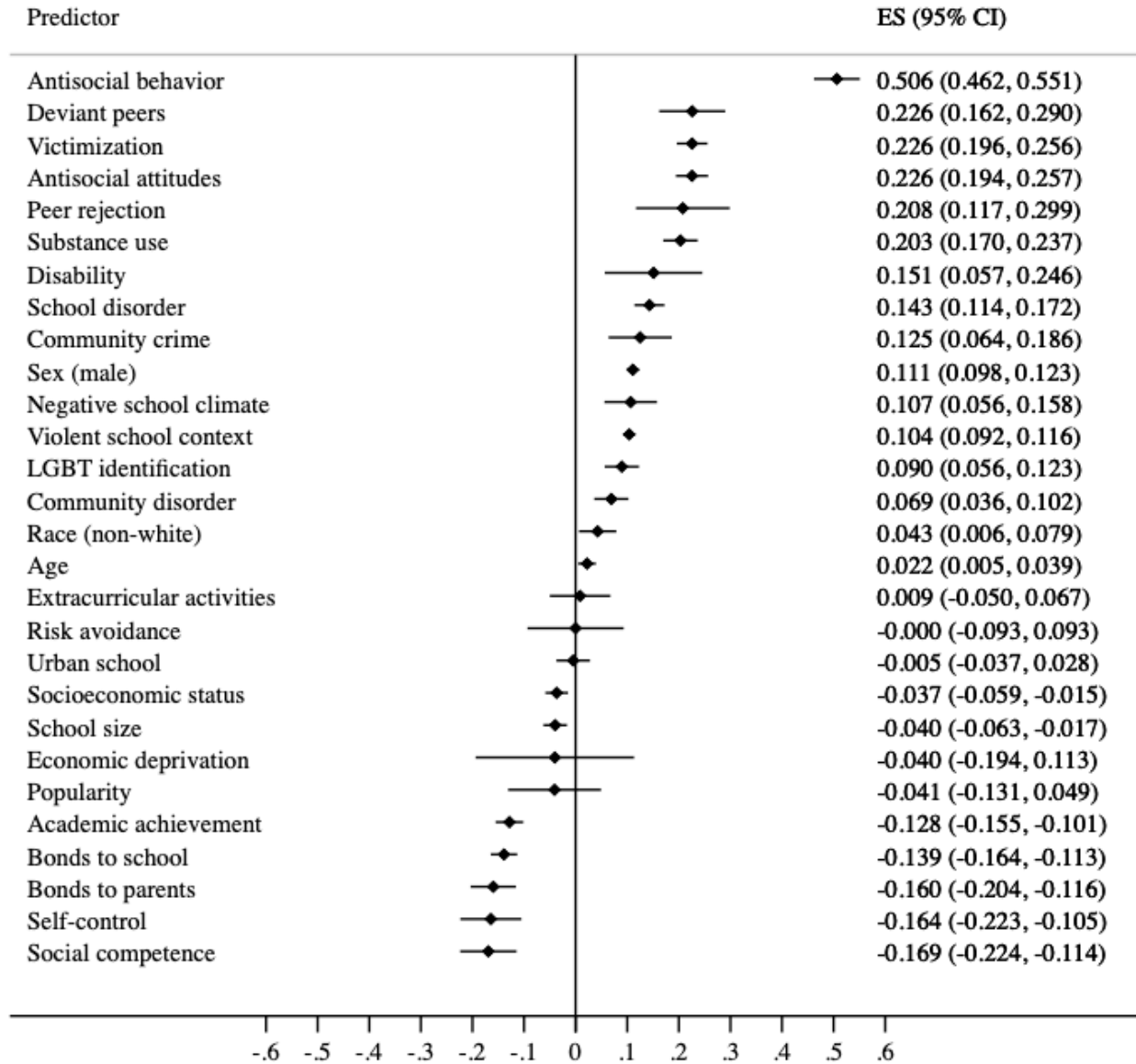
RESULTS:
PERPETRATION OF SCHOOL VIOLENCE

TABLE I. RANK ORDERED PREDICTOR DOMAINS FOR SCHOOL VIOLENCE PERPETRATION

Rank	Predictor	Rank	Predictor
1	Antisocial behavior	16	Negative school climate
2	Deviant peers	17	Violent school context
3	Victimization	18	LGBT identification
4	Antisocial attitudes	19	Community disorder
5	Peer rejection	20	Race (non-white)
6	Substance use	21	School size
7	Social competence (-)	22	Socioeconomic status
8	Self-control (-)	23	Age
9	Bonds to parents (-)		
10	Disability (physical or learning)		
11	School disorder	<i>n.s.</i>	Risk avoidance
12	Bonds to school (-)	<i>n.s.</i>	Extracurricular activities
13	Academic achievement (-)	<i>n.s.</i>	Popularity
14	Community crime	<i>n.s.</i>	Urban school
15	Sex (male)	<i>n.s.</i>	Economic deprivation

Note: Predictors negatively associated with school violence perpetration are indicated by (-).
n.s. indicates that there was no statistically significant relationship.

FIGURE I. FOREST PLOT FOR SCHOOL VIOLENCE PERPETRATION



GENERALITY OF EFFECTS: SCHOOL VIOLENCE PERPETRATION

- The strength of most predictors did not vary across outcomes of bullying, violent offending, nonviolent offending, general delinquency, and bringing a weapon to school
- Exceptions:
 - Antisocial behavior: effect size was weaker for weapon carrying
 - Victimization: effect size was weaker for weapon carrying
 - Age: effect size was weaker for violent offending
 - Sex (male): effect size was weaker for bullying
 - Socioeconomic status: effect size was weaker for nonviolent offending
 - Negative school climate: effect size was stronger for general delinquency

SUMMARY OF FINDINGS: SCHOOL VIOLENCE PERPETRATION

1. Antisocial behavior is by far the strongest risk factor. Means that:
 - Youth who partake in antisocial behaviors outside of school engage in similar behaviors inside of school
 - Past behavior is a strong predictor of future behavior
 - Youth are versatile when it comes to the types of aggression, delinquency, or violence that they commit at school
 - But: antisocial behavior was a weaker predictor of bringing a weapon to school
2. Deviant peers and antisocial attitudes had some of the strongest associations with school violence perpetration
 - Consistent with social learning theory – *differential association and definitions*

SUMMARY OF FINDINGS: SCHOOL VIOLENCE PERPETRATION

3. Victimization was a robust correlate of school violence perpetration
 - Similar in strength to deviant peers
 - Youth who have been bullied, abused, or harassed—either at school, at home, on the streets, or online—are more likely to harm other students and engage in destructive behaviors at school
4. Peer rejection was among the top five strongest correlates
 - Its effects outweighed traditional criminological predictors of self-control, bonds to parents, bonds to school, and academic achievement
 - Should be better incorporated into the study of school violence perpetration
5. Weak/null predictors:
 - LGBT identification, community disorder, race, school size, socioeconomic status, age, risk avoidance, extracurricular activities, popularity, urban school, economic deprivation

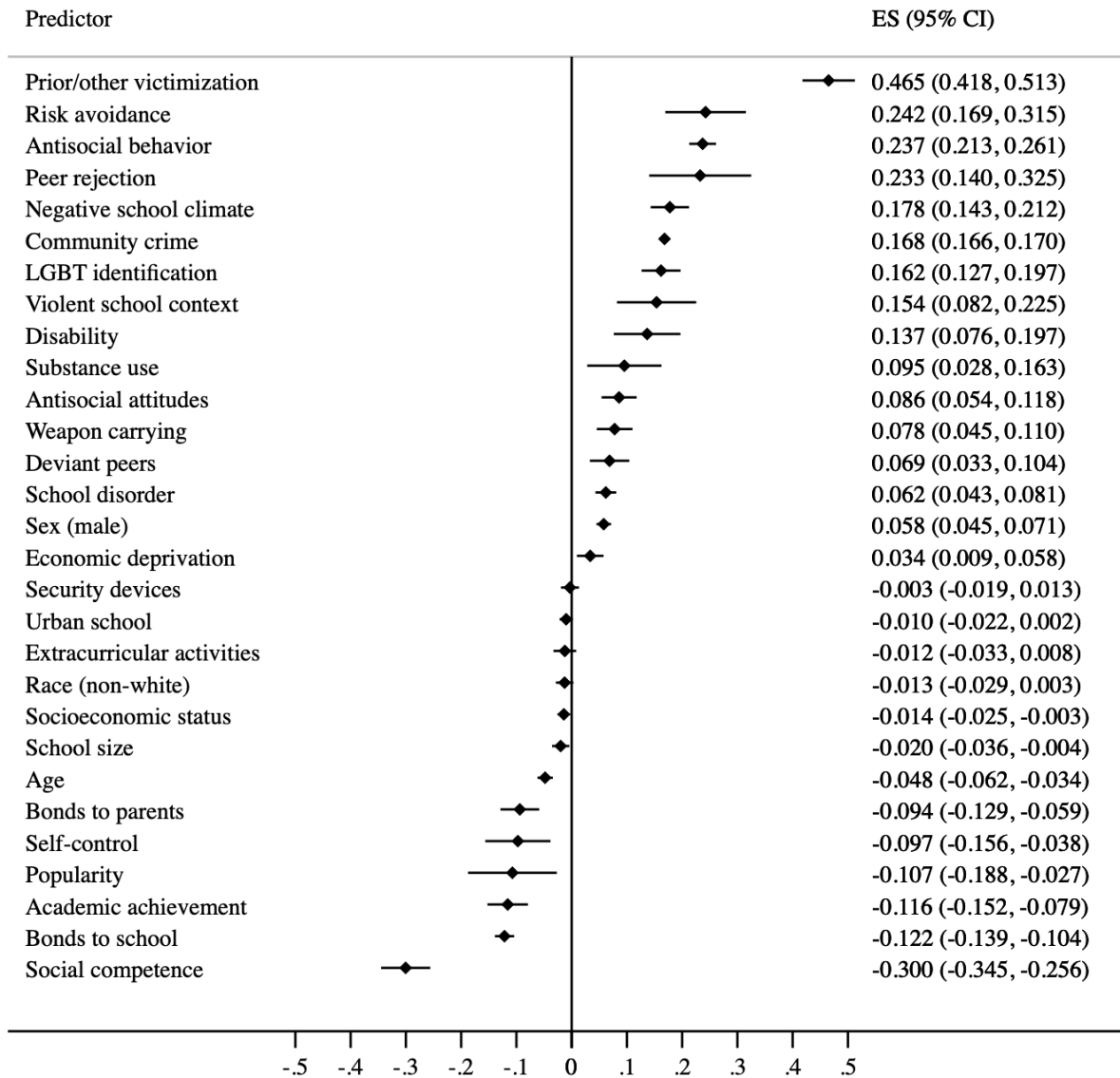
RESULTS:
SCHOOL VICTIMIZATION

TABLE 2. RANK ORDERED PREDICTOR DOMAINS FOR SCHOOL VICTIMIZATION

Rank	Predictor	Rank	Predictor
1	Prior/other victimization	16	Bonds to parents
2	Social competence (-)	17	Antisocial attitudes
3	Risk avoidance	18	Weapon carrying
4	Antisocial behavior	19	Deviant peers
5	Peer rejection	20	School disorder
6	Negative school climate	21	Sex (male)
7	Community crime	22	Age (-)
8	Violent school context	23	Economic deprivation
9	LGBT identification	24	School size
10	Disability (physical or learning)	25	Socioeconomic status
11	Bonds to school (-)		
12	Academic achievement (-)	<i>n.s.</i>	Race (non-white)
13	Popularity (-)	<i>n.s.</i>	Extracurricular activities
14	Self-control (-)	<i>n.s.</i>	Urban school
15	Substance use	<i>n.s.</i>	School security devices

Note: Predictors negatively associated with school victimization are indicated by (-).
n.s. indicates that there was no statistically significant relationship.

FIGURE 2. FOREST PLOT FOR SCHOOL VICTIMIZATION



GENERALITY OF EFFECTS: SCHOOL VICTIMIZATION

- The strength of most predictors did not vary across outcomes of bullying victimization, violent victimization, nonviolent victimization, general victimization, and exposure to school violence
- Exceptions:
 - Negative school climate: effect size was stronger for exposure to violence
 - Community crime: effect size was stronger for exposure to violence
 - Violent school context: effect size was stronger for exposure to violence
 - Antisocial attitudes: effect size was stronger for exposure to violence
 - Age: effect size was stronger for exposure to violence
 - Sex (male): effect size was stronger for violent victimization and weaker for bullying
 - Academic achievement: effect size was weaker for exposure to violence

SUMMARY OF FINDINGS: SCHOOL VICTIMIZATION

1. Prior/other victimization was the strongest risk factor. Means that:
 - Youth who have been victimized in the past are at risk of being victimized again
 - Youth who have experienced victimization in other contexts (at home, on the streets, online) are also likely to be victimized at school
 - Youth who suffer victimization at school tend to experience it in multiple forms (e.g., physical, verbal, and relational victimization)
2. Social competence was a robust protective factor
 - Youth high in social competence—characterized by effectiveness in social interactions, adaptability across social contexts, and the ability to maintain positive relationships with others—are less likely to be victimized at school
 - Youth low in social competence—kids who do not have strong social skills and who struggle with being collaborative—are at risk for being targeted and harassed

SUMMARY OF FINDINGS: SCHOOL VICTIMIZATION

3. Antisocial behavior is a strong risk factor for school victimization
 - Youth who are victimized at school are also likely to engage in delinquency
 - Consistent with the victim-offender overlap
4. Youth who are rejected by their peers are at greater risk for victimization at school
5. Risk avoidance is correlated with school victimization
 - Risk avoidance = avoiding people or places at school out of fear of harm
 - Several studies presented cross-sectional associations between school victimization and risk avoidance, where time ordering could not be established
 - Youth likely avoid people or places at school *because* they have been victimized
6. Weak predictors:
 - Self-control, substance use, bonds to parents, antisocial attitudes, weapon carrying, deviant peers, school disorder, sex, age, economic deprivation, school size, socioeconomic status, race, extracurricular activities, urban school, school security devices

DISCUSSION AND CONCLUSIONS

RESEARCH IMPLICATIONS

- Peer and social dynamics should be central to the study of school violence
- School violence and victimization are not interchangeable outcomes
 - Although overlap exists among their strongest correlates, they are also influenced by unique sets of factors
 - Victims of school violence and those who perpetrate it are not always the same individuals
- Need for more research that focuses on serious forms of violence at school
 - Most of the literature is based on bullying
- Researchers should obtain more detailed information about the situations and contexts surrounding violent incidents

POLICY IMPLICATIONS

- Antisocial behavior, victimization, and peer rejection are universal factors that should be targeted in interventions to reduce school violence
 - For school violence perpetration: deviant peers and antisocial attitudes should also be of focus
 - For school victimization: social competence needs to be recognized
- School interventions, on their own, may be insufficient at addressing the top risk factors identified in the meta-analysis
 - Many problems likely originate in the home or in the community
 - Holistic interventions that include peers, parents, and the broader community are needed
- Must be cautious of punitive interventions or target-hardening approaches (e.g., metal detectors, cameras, and other school security devices)
 - May have unintended consequences; not found to be strongly related to school violence

THANK YOU!

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