

CHAPTER 5

Weapons and Schools

I was in the ninth grade when I first saw a gun on campus. I had heard about guns, but I personally saw only knives, nunchucks, brass knuckles, and a club on campus. I was in honors geometry and asked for a pass to go to the restroom. While at the urinal, I felt a strong kick from behind. Low and behold, four local Latino gang members were laughing and taunting me because I had urinated on my pants after being kicked. In anger I quickly sprang up and punched the gang leader, Frank, in the face. He fell to floor bleeding with his nose swelling. I was rather large for my age and was already more than 6 feet tall. I aggressively approached the three other gang members when one pulled his shirt up and said, “You wanna get some of this?” He brandished a handgun under his shirt. Immediately the other two students pulled their shirts up and smiled. I stopped, lifted up my hands, and slowly walked back toward the urinals. Frank got up and punched me in the face. Now I was bleeding and quite scared. We heard the voice of the vice principal down the hallway. Frank threatened, “I’m gonna kick your ass after school—meet me at the gate or you are a pussy.” They quickly streamed out of the bathroom. I was stunned and in shock. I cleaned up and went back to class. Clearly, my mind was in another place, and I could not focus on geometry.

My classmates immediately noticed the cut on my face and wrote notes to me. The teacher and vice principal who saw me in the hallway said nothing—perhaps they did not notice the cut. I was afraid to report the incident. I did not think anyone in the school could protect me. Later that day, Uzi, a member of a Middle Eastern gang, approached me and said he heard what happened. He asked if I needed their help to get home. I said yes. He said that meant I would need to do homework for a group of his gang members for a month. I agreed. Uzi then pulled out a semiautomatic handgun and said, “You go through the north gate and run home—we’ll meet them at the south gate and explain the situation to them. They are outgunned.” And so it was. I ran home. Uzi and his gang met Frank and members of the Latino gang and explained that I was off limits and should be considered a member of the Middle Eastern gang. So they agreed. I continued to see Frank and members of the Latino gang daily on campus. I can’t say I was not afraid when I was alone near them. Yet they ignored me, except for an occasional stare. I did homework for many students for a good period of time. I was very strategic and aware of where I went after school. I gave a fake home address when registering for high school so I could attend a different school, where I hoped I would not see this group.

—Ron Avi Astor

Columbine, Sandy Hook, and other mass school shootings of the past decade are having a major impact on the public discourse, policies, and legislation. Historically, changes in legislation and funding for school safety can be traced to a relatively small number of tragic and shocking mass shootings in schools. This focus, however, has severely constrained the conceptual and empirical discourse on other weapon-related issues facing schools. In this chapter, we aim to expand this discussion to include issues such as weapon-related incidents that do not result in homicide or even injury, the use of many different types of weapons in addition to guns, and students' experiences of being threatened with a weapon or even seeing and hearing about a presence of a weapon on school grounds. We think that in a framework that places the school in the center, these different types of exposure have important effects on perpetrators, victims, and the school community as a whole.

With our school-centered expanded view of weapon-related experiences, we identify gaps in the existing literature and argue that many relevant literatures are currently not connected, limiting our understanding of the issue of weapons in schools. Specifically, we draw attention to the disconnect between the literature on bullying and weapons and discussions of the presence of gangs in school. We discuss how being a gang member relates to carrying a weapon on school ground and, more importantly, what it means to be a student or staff member in a school with many gang members.

To study these issues more closely, we analyze data from the California Healthy Kids Survey (CHKS) and Youth Risk Behavior Surveillance (YRBS; see Appendix 1 for details on the YRBS database). We present relevant epidemiological data on the various weapon-related experiences that we identify and ask how student- and school-level factors are associated with these experiences. In the final part of the chapter, we present ideas on future research and policy implications directly relevant to the issues discussed in this chapter.

CURRENT PREOCCUPATION WITH MASS SHOOTINGS

More than any other historical set of events, the school shootings and school suicides of the past two decades have driven the school safety and bullying literatures. They have been the primary force behind increased legislation, funding, policy, programs, and intervention strategies (Kupchik, Brent, & Mowen, 2015; Nekvasil, Cornell, & Huang, 2015). Most of the past two decades of research following shootings and weapon use has focused on the identification of potential shooters who might kill many innocent students and staff members. Many programs were developed to prevent such events and prepare school staffs to respond to them effectively. Consequently, empirical inquiries have tried to identify situations,

people, profiles, or crisis prevention strategies to identify mass shooters or reduce the number of deaths when these mass horrific acts occur (Blair & Schweit, 2014; Gerard, Whitfield, Porter, & Browne, 2016).

This public policy and academic preoccupation with weapons only in the context of mass shootings, to the almost total neglect of other types of weapon awareness or involvement, is not productive. Much of the scientific attention has addressed some of the rarest events and neglected much more frequent events and experiences that, although not lethal, cause harm and suffering. To illustrate, consider the highly sophisticated work conducted by Nekvasil et al. (2015). These authors were concerned with the public perception that schools are more dangerous than other contexts, perceptions that may have led to enormous investments in protecting schools from mass homicides. These authors analyzed all incidents of homicides with multiple victims and compared incidents on school grounds with incidents in other places such as residences and restaurants. They found that multiple-casualty homicides were much more common in residences (47%) versus schools (0.8%). Based on these findings, they argued that the public perception of schools as a high-risk location regarding homicides is inaccurate and questioned “the massive allocation of public funding and human resources to school security” (Nekvasil et al., 2015, p. 241; also see Cornell, 2015a; DeAngelis, Brent, & Ianni, 2011).

Although we agree that multiple homicides in schools are very rare, our conclusion based on their analysis is that it calls into question not whether the allocation of resources to school security is justified but rather whether we are investing these resources in the right place. We suggest that the presence of weapons in school is real and much more frequent than many realize, causes harm, and needs to be reduced much further. This goal may require different foci than the profile of the next potential mass shooter and using valuable resources to prepare for an extremely rare hostage situation. Rather, resources should be invested in understanding weapon-related issues facing many schools and students every day and developing policies and practices that increase the safety of students, without the ill effects of some of the more draconian measures employed today. We discuss the difficult balance between protecting student safety and the school’s responsibility to support even the most troubled students in our schools, including students attending our most troubled schools.

In this chapter, we argue that weapons affect school safety in many ways other than when students and school staff members are murdered with a firearm. We draw attention to the devastating effects on perceptions of safety of the use of firearms (or any other weapon such as a knife or a bat) to wound a member of the school community, a failed attempt to harm someone with a weapon on school grounds, being threatened with a weapon on school ground, or even witnessing another student being threatened with a weapon. Even a rumor about a student bringing a weapon to school with the intention of harming someone has negative implications for school safety.

WHICH WEAPONS?

Most of the current literature focuses on guns in school. There are, however, many potential weapons that students may bring to school grounds. For obvious reasons, most of public discussion has focused on firearms. Almost no discussion has occurred in the policy arena or research literature on knives or sharp objects. Knives and sharp objects are present in almost every household. Students have easy access to knives. Likewise, although many schools during the past 20 years have closed for hours due to bomb threat scares, almost no empirical research exists on this type of threat. Similarly, assault with baseball bats, clubs, stones, bricks, metal objects, chairs, or tables can be lethal but has not been tracked or documented well in the policy or research literatures.

The inclusion of a range of weapons in research and comparisons of the relative prevalence of these weapons may also contribute to our theories regarding gun use and its etiology. For instance, in a previous book (Benbenishty & Astor, 2005) using Israeli student data, we examined both guns and knives on school grounds. We found that more students brought knives and other weapons to school than guns. Our findings showed that weapon carrying was directly associated with the number of times students were personally victimized on school grounds. The pattern was parallel for both guns and knives. This is important, because it shows that access alone (all students have access to knives) does not determine bringing a weapon to school; being involved in school violence is an important determinant of weapon carrying in school.

Support for this assertion can also be found in the only empirical study we found that addressed differences among weapons. Cao, Zhang, and He (2008) argued that the etiology of carrying a gun to school for protection is not the same as that of carrying other weapons to school. Data from the 2001 School Crime Supplement, a nationally representative sample of school youth, supported the hypotheses that correlates of carrying guns and other weapons to school were different. Specifically, whereas bringing a gun to school was associated only with being involved in a fight and having friends who carry guns, bringing other weapons in school was associated with these variables and also with a much wider set of factors (such as awareness of the presence of gangs at school, skipping school due to fear of victimization, and fear of being attacked). These findings may reflect the US context and may perhaps be different in countries that have stricter gun policies.

In contrast to the large body of research on homicides in school, the number of studies focusing on other aspects of weapons in school is very limited, and most of these studies on weapon carrying did not even ask whether a gun was carried on school grounds or in the community (e.g., Vaughn, Salas-Wright, Boutwell, DeLisi, & Curtis, 2017). Nonetheless, some studies have addressed weapon-related issues in school. Much of this research focuses on the prevalence and characteristics of students carrying a weapon on school grounds. Little research has focused on the effects such weapons have on other students in school. Clearly, being threatened

by a weapon, seeing a weapon carried by another student, or hearing rumors that weapons are on school grounds could create a sense of fear, disconnectedness to the school, or inability to focus on academics.

The public and academic research community's preoccupation with weapons only involved in mass shootings, to the virtual neglect of other types of weapon awareness or involvement, is not productive. All types of involvement with weapons have consequences for students and the entire school community. The presence and awareness of weapons has an indirect impact on many students. Hearing that another student has brought a weapon to school may have major consequences for other students, who may fear for their safety and even avoid attending school because they are afraid of the weapon. Being injured or even just threatened by a weapon may have even more serious consequences. A shooting in school, even when no one has been physically injured, may have lasting consequences for all school constituents but often is only sporadically reported in the media or receives minimal public attention. To address this gap in the literature, we suggest a much more nuanced and layered scientific approach that distinguishes among the actual use of a lethal weapon in school (and not only guns), carrying a weapon to school (and not necessarily using it), being threatened with a weapon in school, and seeing a weapon carried by another student in school.

WHO BRINGS WEAPONS TO SCHOOL?

A limited number of studies on weapons in school have focused on the prevalence and predictors of weapon carrying in school. A systematic review of the literature revealed an association between being involved in violence and carrying a weapon (van Geel, Vedder, & Taniol, 2014). Specifically, compared to students not involved in violence, victims (odds ratio [OR] = 1.97), bullies (OR = 3.25), and bully-victims (OR = 4.95) were more likely to carry weapons. The odds that bully-victims in the United States would carry weapons were much higher than those found in other countries (van Geel et al., 2014). A more recent and extensive review (Valdebenito, Ttofi, Eisner, & Gaffney, 2017) reached similar conclusions; when compared to noninvolved students, victims (OR = 1.79), bullies (OR = 3.24), and bully-victims (OR = 5.66) were much more likely to carry weapons. Interestingly and surprisingly, Dukes, Stein, and Zane's (2010) study of 542 adolescent students in the United States showed that relational bullying (e.g., spreading mean rumors) had a stronger influence on weapon carrying than physical bullying. These effects were stronger for adolescent boys compared to girls. Research further suggested that the effects of victimization on weapon carrying are mediated by students' perceptions of school safety (Esselmont, 2014). Here again, this effect was stronger for boys.

This set of findings on the correlates of weapon involvement in school draws attention to gang-affiliated students, who are involved in violence much more

than other students (Estrada, Gilreath, Astor, & Benbenishty, 2014), have strong relationships with their peer group, and have weaker attachment to school (Bradshaw, Waasdorp, Goldweber, & Lindstrom Johnson, 2013).

GANGS IN SCHOOLS AND WEAPONS

Expanding our focus on weapons on school grounds and their impact on students will help shed light on existing gaps in the literature. One of the most glaring gaps is overlooking the role that gangs and gang membership play in the prevalence and impact of weapons in school. Studies conducted by our team showed that in California, 8.5% of students identified as gang members. Students who identified as gang members accounted for 41% of students statewide who reported bringing a gun to campus. Students affiliated with gangs accounted for 27% of all students statewide who brought other potentially lethal weapons to school grounds (Estrada, 2011). Clearly, any policy aiming to reduce the number of weapons in school needs to address the connection between gang membership and weapon involvement in school and find ways to change how gangs contribute to this problem.

A handful of past studies found evidence that individual students who identify as gang members tend to bring more weapons to school. But is it possible that in schools with many gang members other students who are not gang members also carry more weapons? Currently, we do not know the answer to this question because what we know about weapons on school grounds is focused on individual characteristics and not school-level dynamics. For example, we do not know to what extent the presence of gangs in the school is related to overall use of weapons on school grounds (i.e., not necessarily by gang members). Some recent empirical research showing gangs are involved in many school victimization events (often categorized as bullying) suggested that the evolution of the school safety and bullying literature has theoretically ignored issues like gangs (Estrada, Gilreath, Astor, & Benbenishty, 2016). Are there schools in which these contextual issues intermingle strongly with issues of school safety? We suspect that many linkages exist among school safety, weapon use, and gang activity on school grounds. Likewise, although school-based gang reduction efforts have occurred in the past, the gang literature has not carefully explored empirically how gangs may change school safety factors (Estrada et al., 2014; Estrada, Gilreath, Sanchez, & Astor, 2017).

The focus on schools as a unit of analysis when studying weapons is especially pertinent. Schools have a unique social environment due to the fluidity of relationship between peer group dynamics and student–teacher relationships. When a potentially lethal weapon such as a gun or knife is on school grounds, a very large proportion of students may become aware of its presence through discussion, social media, and rumors during, before, and after school hours. How

does their knowledge of a weapon on school grounds affect their sense of school safety? Moreover, when students are verbally or physically threatened or injured by a weapon on school grounds, how does this affect them, their friends, and the wider school peer group? Knowing that weapons are in school and students are being threatened with weapons could increase the number of students who carry weapons on school grounds for self-protection.

EMPIRICAL CASE EXAMPLE OF WEAPON-RELATED BEHAVIORS IN CALIFORNIA SCHOOLS

To explore these questions, we used our CHKS secondary school database, which has information on more than half a million students (seventh, ninth, and 11th graders) and is conducted every other year in all California schools. The following data are from middle and high schools across California during the 2011 to 2013 academic years. In this large population sample, 528,436 respondents had complete demographic data needed to conduct these analyses (gender, school level, age, and responses to weapon-related questions). The students came from 1,849 distinct schools (more details about the CHKS are presented in Appendix 1). We present our findings at both the individual and school levels because they have different meanings (additional technical details on the analyses presented in this chapter are presented in Appendix 2, Note 3). The contrast between the two types of analyses reveals important contextual and theoretical directions that should be considered in future research.

Table 5.1 shows the overall frequency of carrying a gun, carrying a knife or club, being threatened by a weapon, or seeing someone with a weapon during the past 12 months among secondary school students.

Table 5.1 suggests that between 2011 and 2013, about 4% of California secondary school students brought a gun to school grounds. If we assume there are

Table 5.1 STUDENT-LEVEL DISTRIBUTION (%) OF WEAPON-RELATED BEHAVIORS
(*N* = 528,436)

| | Carried a Gun | Carried a Knife or Club | Threatened or Injured with a Gun, Knife, or Club | Saw a Gun, Knife, or Other Weapon |
|-----------------|---------------|----------------------------|---|---|
| 0 times | 96.0 | 92.0 | 93.2 | 76.7 |
| 1 time | 1.6 | 3.4 | 3.6 | 11.7 |
| 2 or 3 times | 0.9 | 1.7 | 1.5 | 5.9 |
| 4 or more times | 1.5 | 2.9 | 1.7 | 5.7 |
| At least once | 4.0 | 8.0 | 6.8 | 23.3 |

approximately 2.5 million students in middle and high school in California, this amounts to a minimum of 100,000 guns brought to school grounds during this period. It is likely that this number is higher because some students reported bringing the gun more than once. Based on this survey, we can further estimate that about 200,000 knives or clubs were on school grounds. Overall, many students reported bringing some type of potentially lethal weapon to school grounds. Additionally, approximately 7% of secondary students said they were threatened or injured by a weapon on school grounds. This amounts to approximately 175,000 students in the state of California.

About one-quarter of all secondary school students reported having seen a weapon on school grounds. In California alone, based on the total number of secondary school students, this amounts to approximately 625,000 students who reported seeing a gun, knife, or other weapon on school grounds. These findings have been consistent each year during the past decade, with different groups of students participating each year. Although the base rate of carrying a gun is relatively low, it still represents a large absolute number of weapons on school grounds in California during a year.

Table 5.2 gives a more detailed view that includes gender by grade level. There are clear gender differences but no significant differences across grades. This is true for other years and datasets using the same questions. Boys are about twice as likely as girls to carry a weapon on school grounds. Boys are also more likely to be aware of weapons on school grounds, although a sizable proportion of girls report seeing weapons.

We found that the intercorrelations between the various weapon-related behaviors are substantial (ranging from .50 between carrying a gun and carrying other weapons to .25 between carrying a gun and seeing someone carrying a weapon on school grounds), but they are not high enough to disregard the differences between these different aspects of gun involvement. We therefore address each of these behaviors and the overall set of weapon involvement behaviors.

In bivariate analyses examining correlates of weapon-related issues, we found low correlations with ethnicity and age (grade); low correlations with gender

Table 5.2 WEAPONS BY GRADE AND GENDER (%)

| | 7th Grade | | 9th Grade | | 11th Grade | |
|---|-----------|------|-----------|------|------------|------|
| | Girls | Boys | Girls | Boys | Girls | Boys |
| Carried a gun | 2.4 | 5.8 | 2.5 | 6.3 | 1.7 | 5.5 |
| Carried a knife or club | 5.3 | 10.9 | 5.4 | 11.6 | 4.2 | 11.1 |
| Threatened or injured with a gun, knife, or weapon | 5.8 | 9.9 | 5.0 | 9.2 | 3.3 | 7.7 |
| Saw a gun, knife, or weapon | 24.1 | 29.2 | 20.8 | 26.9 | 15.2 | 23.9 |

and school climate perceptions; and substantial correlations with gang membership, victimization, and feeling unsafe at school. This means that merely being from a specific ethnic group, of a certain age, or even identifying with a certain gender is not strongly connected with weapons. Perhaps issues such as poverty and high concentrations of gang-affiliated students in schools play a larger role. We explore this possibility in analyses in a subsequent section of this chapter.

Next, we performed multiple regression analyses to determine the unique contribution of each predictor to the probability of engaging in weapon-related behaviors (Table 5.3). We performed the analyses in a hierarchical manner, entering predictors in stages: first we added student background characteristics, followed by gang membership, victimization indexes, feelings of school safety, and

Table 5.3 HEIRARCHICAL LOGISTIC MULTIPLE REGRESSION ANALYSES FOR PREDICTING STUDENT-LEVEL WEAPON-RELATED BEHAVIORS (R^2 AND ODDS RATIOS)

| | Carried a Gun | Carried a Knife or Club | Threatened or Injured with a Weapon | Saw a Weapon |
|--------------------------------------|------------------|----------------------------|--|-----------------|
| Step 1: Student background (R^2) | (.04*) | (.04*) | (.03*) | (.02*) |
| Race and ethnicity (vs. White) | | | | |
| African American | 1.29* | 0.88* | 1.10 | 1.01 |
| Asian | 0.80* | 0.71* | 0.71* | 0.81* |
| Hispanic | 1.22* | 1.04 | 1.08* | 1.17* |
| Male (vs. female) | 2.27* | 2.18* | 1.85* | 1.41* |
| Grade 7 or 9 (vs. Grade 11) | 1.40* | 1.16* | 1.43* | 1.44* |
| Step 2: Gang membership (R^2) | (.17*) | (.11*) | (.09*) | (.04*) |
| Gang member | 3.72* | 2.58* | 2.16* | 1.21* |
| Step 3: Victimization (R^2) | (.40*) | (.35*) | (.37*) | (.28*) |
| Moderate | 1.16* | 1.35* | 2.32* | 2.01* |
| Discrimination | 1.79* | 1.39* | 1.71* | 1.26* |
| Severe | 4.46* | 4.59* | 3.02* | 3.33* |
| Step 4: School safety (R^2) | (.40*) | (.35*) | (.37*) | (.29*) |
| Feel unsafe at school | 0.90* | 1.05* | 1.11* | 1.26* |
| Step 5: School climate (R^2) | (.40*) | (.36*) | (.37*) | (.29*) |
| School belonging | 0.79* | 0.88* | 0.87* | 1.02 |
| Adult support at school | 0.83* | 0.90* | 0.90* | 1.03* |
| School participation | 1.16* | 0.98 | 1.13* | 0.99 |

* $p < .001$.

perceptions of school climate. For each step, we present the cumulative proportion of variance (R^2) explained by the current and the previous steps.

What is very clear from Table 5.3 is that after we account for students' personal background characteristics (which did not explain much of the variance, i.e., .04), gang membership and victimization, especially severe victimization, explained much more about students' involvement with weapons. A student affiliated with a gang was much more likely to report carrying a gun to school (OR = 3.72) after controlling for demographic background, as was a student victimized by severe violence (OR = 4.46) after controlling for demographics, gang affiliation, and taking into account other types of victimization. Note that school safety and climate did not independently contribute to the explained variance, after accounting for issues of gang membership and victimization.

SCHOOL LEVEL

Most prior studies have examined these questions only at the individual level. Based on our theoretical model, however, we think it is critical to examine these questions at the school level as well. Focusing on weapon-related issues at the school level may provide insights that could be productive for both policy and theory building. From a policy perspective, it is important to describe school-level assessments of the prevalence of guns. As we previously reported, 4% of students in high schools in California reported carrying a weapon to school at least once. From a policy perspective, it is important to know whether most schools in California have a similar level of weapon carrying or in contrast, whether most weapons carried to high schools in California were brought to a very small number of schools, whereas all other schools are almost free of weapon involvement. If the latter, prevention efforts should be targeting this small set of schools, rather than spread across a very large number of schools that may not have any such issues. For instance, Benbenishty (2002) found in a national monitoring study in Israel that 52% of the 151 elementary schools in the study did not have any reports of seeing a weapon in school, but in 17 schools, 16 of which were Bedouin schools, at least 10% of the students reported seeing a weapon at school. Similarly, although in 52% of secondary schools, no students reported being threatened with a weapon, in 13 schools more than 10% of the students (up to 22% in one school) reported being threatened with a weapon during the prior month. Such concentration of weapon involvement has clear implications for policy and prevention efforts.

From a theory development perspective, contrasting the school and student levels analytically could provide some empirical clues regarding the potential mechanisms most associated with weapons on school grounds. For example, a weapon-related behavior might have low prevalence at the student level, but certain schools might have a very high prevalence of this behavior. Although many

Table 5.4 DISTRIBUTION (%) OF WEAPON-RELATED BEHAVIORS IN SCHOOLS
(*N* = 1,849)

| Percentage of Students | Carried a Gun | Carried Knife or Club | Threatened or Injured with a Weapon | Saw Someone Carrying a Weapon |
|------------------------|---------------|-----------------------|-------------------------------------|-------------------------------|
| 0.00 | 10.2 | 4.3 | 4.8 | 0.5 |
| 0.01–1.99 | 11.2 | 0.9 | 1.5 | 0.0 |
| 2.00–3.99 | 32.7 | 7.4 | 10.0 | 0.1 |
| 4.00–5.99 | 22.5 | 14.0 | 21.4 | 0.2 |
| 6.00–7.99 | 21.3 | 19.8 | 22.0 | 0.8 |
| 8.00–14.99 | 9.0 | 39.5 | 33.3 | 9.8 |
| 15.00+ | 3.3 | 12.1 | 7.0 | 88.6 |

evidence-based psychology-oriented programs are focused on individual students, this type of finding may point to school reform or community- or context-wide mechanisms that require different type of interventions, going beyond the student level.

To move to the school level, we calculated for each school the percentage of students reporting that a weapon-related behavior occurred at least once during the preceding 12 months. In Table 5.4, we present the school-level distribution.

The table shows that 10.2% of secondary schools in California had no reports of students carrying a gun to school, whereas 3.3% of schools had 15% or more of their students report carrying a gun to school. In contrast, almost no schools had none of their students report seeing a gun in schools; in almost 90% of the schools, at least 15% of students reported seeing a weapon in school.

From a policy perspective, two lessons can be learned. First, a small number of schools (that could be identified by the state) have a very large number of weapons and require immediate attention before a student is hurt. Also, in almost all schools, students have seen a weapon (potentially one incident for a short period but known to many students on school grounds). The pervasiveness of awareness of weapons becomes very relevant when we explore the overall impact such knowledge has on issues of subjective school safety, a sense of connectedness to the school, and willingness to even attend school.

We found that the intercorrelations between weapon-related behaviors are mostly moderate and high (Table 5.5). They are much higher at the school level than the individual level. For instance, whereas the correlation between carrying a gun and carrying a knife or club was .50 at the student level, it was .73 at the school level. We think these intercorrelations are meaningful. First, they support the view that these are valid reports. At the student level, the higher correlation between carrying a gun and carrying a knife compared to carrying a gun and seeing a gun seems to indicate a valid pattern. At the school level, in schools in which more students

Table 5.5 INTERCORRELATIONS BETWEEN WEAPON-RELATED BEHAVIORS AT THE STUDENT AND SCHOOL LEVELS

| | 1 | 2 | 3 | 4 |
|--|------|------|------|------|
| 1. Carried a gun | | .50* | .43* | .25* |
| 2. Carried a knife or club | .73* | | .41* | .35* |
| 3. Threatened or injured with a weapon | .67* | .68* | | .33* |
| 4. Saw someone carrying a weapon | .45* | .60* | .57* | |

Note. Student-level correlations reported above the diagonal and school-level correlations reported below the diagonal.

* $p < .01$.

reported carrying a weapon, more of the other students reported seeing a student carrying a weapon. At the student level, we used point biserial correlations with weapon-related behaviors that were measured dichotomously. At the school level, we used Pearson correlations with the percentage of students in school reporting on a weapon-related behavior.

We now turn to asking questions about predictors of weapon-related behaviors on school grounds. Table 5.6 presents correlations of weapon-related behaviors with other student- and school-level variables. We should clarify that a predictor such as African American race and ethnicity means at the student level that a student reported being African American and at the school level indicates the percentage of students in that school who reported being African American.

The table provides many useful insights. We focus on the many differences apparent when focusing on an individual versus a school as whole. Although the race ethnicity of individual students was associated very weakly (or not at all) with their involvement with weapons, at the school level, schools with more African American and Hispanic students also had more reports of weapon involvement. This may be explained by correlations between the number of students who receive free or reduced-price in school and the number of students reporting weapon-related issues, especially seeing someone in carrying a weapon in school ($r = .40$).

The involvement of individual students with gangs and gang victimization were strongly associated with their weapon-related behaviors. Still, school-level reports on gang involvement and severe victimization correlated more with weapon-related reports than at the student level. For instance, although student-level correlation between gang membership and carrying a gun was .25, it was .58 at the school level, showing that schools with many gang members also had many more students reporting carrying a gun to school.

What may be the most illuminating finding is the contrast between student- and school-level correlations with climate. All student-level correlations of perceptions of safety, teacher support, and participation with weapon issues were low, whereas at the school level they were quite high. Consider the correlation of school safety

Table 5.6 CORRELATIONS BETWEEN WEAPON-RELATED BEHAVIORS AND PREDICTORS AT THE STUDENT AND SCHOOL LEVELS

| | Carried a Gun | | Carried a Knife or Club | | Threatened or Injured with a Weapon | | Saw Someone Carrying a Weapon | |
|--------------------------------|---------------|------|-------------------------|------|-------------------------------------|------|-------------------------------|------|
| | Sch | Stu | Sch | Stu | Sch | Stu | Sch | Stu |
| <i>Demographics</i> | | | | | | | | |
| SES ^a | .27 | – | .27 | – | .28 | – | .41 | – |
| African American | .18 | .03 | .13 | .02 | .18 | .03 | .24 | .01 |
| Asian | –.17 | –.02 | –.21 | –.03 | –.19 | –.03 | –.25 | –.04 |
| Hispanic | .21 | .02 | .13 | .02 | .16 | .01 | .21 | .03 |
| Gender | .25 | .09 | .32 | .11 | .24 | .08 | .10 | .08 |
| Grade | –.23 | .02 | –.28 | .01 | –.10 | .03 | .07 | .04 |
| <i>Gangs and victimization</i> | | | | | | | | |
| Gang | .58 | .25 | .58 | .23 | .50 | .20 | .34 | .13 |
| Moderate victim | .17 | .22 | .22 | .26 | .38 | .34 | .48 | .36 |
| Discrimination | .39 | .28 | .38 | .26 | .45 | .33 | .36 | .25 |
| Severe victim | .71 | .42 | .78 | .47 | .65 | .42 | .57 | .41 |
| <i>Safety and climate</i> | | | | | | | | |
| Safety | –.32 | –.11 | –.34 | –.14 | –.40 | –.17 | –.52 | –.19 |
| Belonging | –.54 | –.13 | –.49 | –.15 | –.49 | –.15 | –.40 | –.13 |
| Teacher support | –.42 | –.11 | –.37 | –.12 | –.34 | –.11 | –.26 | –.09 |
| Participation | –.33 | –.03 | –.37 | –.05 | –.31 | –.03 | –.31 | –.05 |

Note. Sch = school; stu = student; SES = socioeconomic status.

^a Percentage of students in school with low or reduced-price lunch.

All correlations are significant ($p < .001$)

with the percentage of students reporting seeing a weapon ($r = .52$) compared to how safe students who saw weapons felt at school ($r = -.19$). Similarly, compare the correlation between how many students reported carrying a weapon in school and levels of belonging in the student body ($r = -.54$) with the correlation between students who reported carrying a gun to school and feeling a sense of belonging to the school ($r = -.13$).

Next, we performed multiple regression analyses to determine the unique contribution of each predictor to the school-level engagement in weapon-related behaviors. We used the same entry order in the hierarchical regression employed in the student-level regression (Table 5.3) but used *school* background variables in the first step (Table 5.7). Again, the final two steps (school safety and climate) did not add a meaningful amount of explained variance in the model (increases only in the third digit after decimal). This means that although these aspects of school climate were associated with weapon-related behaviors,

Table 5.7 HIERARCHICAL MULTIPLE REGRESSION ANALYSES FOR PREDICTING SCHOOL-LEVEL WEAPON-RELATED BEHAVIORS (R² AND BETA'S)

| School Characteristics | Carried a Gun | Carried Knife or Club | Was Threatened or Injured with a Weapon | Saw Someone Carrying a Weapon |
|---|---------------|-----------------------|---|-------------------------------|
| Step 1: School background (R ²) | (.023*) | (.31*) | (.20*) | (.25*) |
| Enrollment (no. of students) | -.11* | -.13* | -.12* | -.09* |
| Ethnicity: % African-American | .02 | -.06 | .02 | .06 |
| Ethnicity: % Asian | .00 | -.02 | .01 | -.04 |
| Ethnicity: % Hispanic | .08* | -.16* | .05 | -.09* |
| % of free or reduced-price meals | -.05* | .11* | -.04 | .15* |
| Gender: % Boys | -.01* | .05* | .05 | -.04 |
| Grade: % of 7th or 9th graders | .14* | .06 | .07 | .17* |
| Step 2: Gang membership (R ²) | (.41*) | (.47*) | (.33*) | (.30*) |
| % Gang members | .18* | .16* | .14* | .03 |
| Step 3: Victimization (R ²) | (.59*) | (.68*) | (.54*) | (.54*) |
| % Moderate | -.10 | -.07* | .13 | .15 |
| % Discrimination | .18 | .13 | .14 | .01* |
| % Severe | .53 | .64 | .42 | .54 |
| Step 4: School unsafety (R ²) | (.59*) | (.68*) | (.54*) | (.56*) |
| Feels unsafe at school (Mean) | -.19* | -.04* | -.01 | .28* |
| Step 5: School climate (R ²) | (.63*) | (.68*) | (.55*) | (.57*) |
| School belonging (Mean) | -.29* | -.01 | -.18* | .19* |
| Adults support at school (Mean) | -.10* | -.03 | .02 | .05 |
| School participation (Mean) | +.12* | -.04 | .05 | -.07 |

**p* < .01.

they did not independently contribute to explained variance, after accounting for school background, gang membership, and victimization (all were correlated with climate).

This analysis indicates that, at the school level, the concentration of students' background variables did influence all types of school-level weapon-related experiences. It could also suggest highly concentrated schools wherein specific ethnic groups experienced more victimization and presence of gangs than other groups. This interpretation fits well with the other research and data showing schools with many African American, Latino, and low-income students also more commonly report weapon-related events.

Moreover, when the presence of gangs and victimization were included in the mix of variables, they explained much of the variation in the model. This could

mean that when large proportions of students are involved with gangs on school grounds, larger proportions of weapons and students being threatened by weapons also exist. In these types of situations, gangs and victimization experiences define the school climate. School climate variables contributed very little in these types of contexts, beyond the major effects of the presence of gangs and multiple forms of victimization. Large numbers of gang members and weapons could be the defining variables that characterize a school from a climate and socioemotional perspective. A word of caution—these are correlations, and we cannot tell whether negative climate drives high victimization, gangs, and weapons, or if schools with many gangs and high victimization have more negative climates.

The relationships between the percentage of gang members in school (X-axis) and percentage of weapon involvement (Y-axis) are presented in Figure 5.1. The chart clearly shows that the ratio of gang members on school grounds goes hand in hand with how many students bring knives and clubs, bring guns, and were threatened by a weapon on school grounds.

This set of analyses has specific implications for the literatures on school safety research, gangs, and weapons reduction. Although a few studies have explored how gangs affect school climate and weapon use (e.g., Estrada et al., 2013; Estrada et al., 2017), Figure 5.1 shows that it is reasonable to assume that a high proportion of gang members on campus would increase weapon carrying and

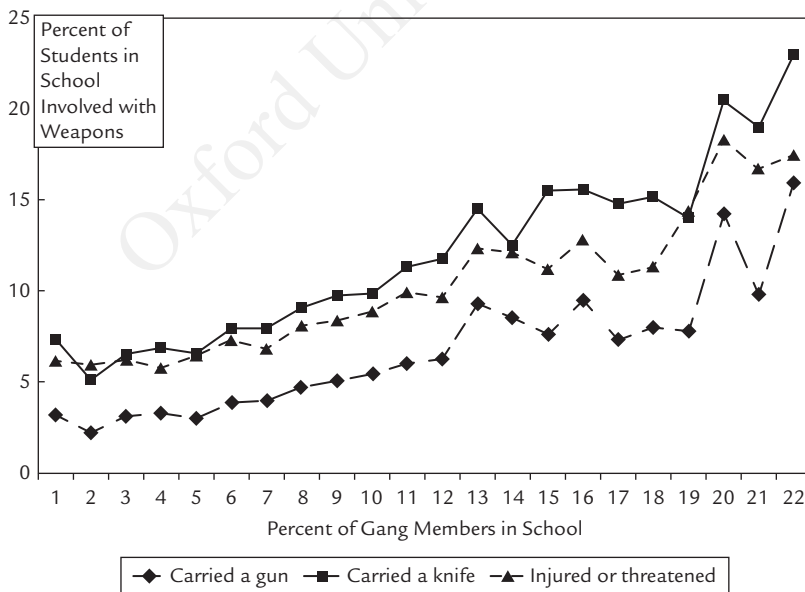


Figure 5.1. School-Level Percentage of Students Involved with Weapons by Percentage of Gang Members in School

being threatened by weapons. This could radically affect the overall dimensions of school climate. Interestingly, we did not find models of school climate or empirical studies of climate that addressed how the presence of gangs in school is associated with climate.

IMPLICATIONS FOR FUTURE RESEARCH

Start with the Epidemiological Basics Regarding the Scope of the Problem

To create an empirical base that supports theory building, interventions, and policy, it is essential to assess the prevalence of various weapon-related behaviors, with a clear emphasis on weapons in school, as separate from weapons in the larger community. The range of self-report behaviors to be assessed needs to be much wider than collected in most studies today. We suggest including reports on seeing or even hearing that there is a weapon in school, being threatened by a weapon, and being injured with a weapon. In these reports, it is important to identify which specific weapon has been used or seen.

For prevention and policy purposes, we suggest that these self-reports be gathered in all schools, or at least in representative samples of relatively small local areas. These local data could be most useful for schools and districts to identify whether they have a weapon problem and determine the specific characteristics of the issues in their schools. These local data could then be aggregated to create regional, state, and national estimates.

Include All Nonlethal Forms of Weapon Victimization

We recognize the importance of better understanding the epidemiology of the most severe incidents involving lethal weapons on school grounds. Nonetheless, we recommend that reports do not overlook incidents of thwarted and failed attempts to cause harm with a weapon. The literature on shootings defines and studies events in which mainly guns and bombs were employed and perpetrators were successful in killing many people (e.g., Metzl & MacLeish, 2015; Nekvasil et al., 2015). As researchers, we do not know how many potentially lethal events were thwarted or unsuccessful at a national level or even for any particular state. We suggest that researchers start with the school site, school district, county, state, and national epidemiological basics first. Future research in this area would greatly increase our understanding of shootings on school grounds that did not result in any homicides. We think that knowing more about weapons at all levels will generate a clearer understanding of weapons on campus, disassociated from the issue of whether a homicide or suicide was completed.

Overlooking nonlethal weapon-related victimization may increase the chances that lethal weapon violence will take place. Ironically, data systems for states and nations have shown for decades consistent accounts of students reporting bringing weapons to school and seeing other students with weapons on school grounds (e.g., CHKS, YRBS).

Based on the CHKS and other surveys, we know that there are weapons on school grounds in many schools. Nevertheless, there seems to be little or no apparent organized response and practices to use these data to identify dangerous schools and treat students' weapon-related reports as red flags that could prevent future weapon-related escalation. Even if no homicides occurred on school grounds, the awareness, threat, and presence of weapons could severely impair a student's ability to learn, focus, and thrive. Furthermore, teachers' awareness and concerns about students bringing weapons to their school may be very detrimental to their sense of safety and ability to focus on teaching. Almost no research has been conducted on this issue. A sense of psychological safety does not have much meaning when there is awareness of potentially lethal weapons on school grounds.

Expand Our Understanding of Gangs and Weapons on School Grounds

As shown in this chapter, gangs and weapons in schools are interconnected. Unfortunately, however, the school safety literature and evidence-based programs rarely focus on either weapons or gangs or how they are connected. Although there have been attempts to develop school-based gang interventions (e.g., Esbensen, Matsuda, Taylor, & Peterson, 2011), these have not been researched or examined routinely in the school safety or bullying literatures. The inclusion of gangs and weapons as part of the school safety discussion and literature is critical in our opinion as a cornerstone of reducing the overall number of weapons and victimization due to threats of weapons on school grounds.

More research needs to be devoted to understanding the directionality of the associations we found and the causal mechanisms that lead to bringing different types of weapons to school, using weapons to threaten or injure students on school grounds, and seeing or being told about weapons in school. This detailed understanding will help scholars build better theories about the etiology and consequences of this range of behaviors and design appropriate prevention and intervention strategies.

Use Multiple Methods to Investigate Mechanisms Leading to Various Weapon-Related Behaviors

Much of the current work in this area has been cross-sectional and based on bivariate and multivariate correlations. If we are to understand better the mechanisms

that lead to using any available weapons or being victimized by the presence of these weapons in school, we need a much wider range of designs and methods. First, it is important to note that we could not find a school-based longitudinal study that examined either individual- or school-level weapon-related issues. A longitudinal design in this area will help address some of the questions we have regarding the use of weapon as a reaction to past victimization or fear of victimization or the impact of having a weapon on subsequent involvement with violence and deviant peer groups such as gangs.

Mixed-methods studies using a range of quantitative and qualitative techniques could also help us understand better these weapon-related behaviors. Furthermore, they could help us understand how students respond to prevention and intervention efforts, including students' views of current policies such as zero tolerance.

IMPLICATIONS FOR POLICY AND PRACTICE

A Public Health Approach, Zero Tolerance, and Weapons in Schools

We strongly suggest a public health strategy in researching, understanding, and addressing the problem of weapons in schools. We also think that weapons on school grounds should not be conceptualized or thought of only in the context of deaths, mass shootings, or guns. All types of weapons deserve the attention of researchers and policymakers. Knives, bats, bombs, and threats with other weapons should be viewed as seriously as firearms. Being threatened with, knowledge of, and seeing weapons on school grounds deserve more research. As demonstrated in this chapter, the connections among crime on school grounds, gang affiliation, victimization, and weapons need to be more seriously conceptualized and researched from a public health perspective. All these issues ultimately should determine how safe the public or researchers perceive different schools.

Yet the determination of schools as safe or unsafe may not be a simple quantification of violent events or weapons. How the students, teachers, parents, community, and administrators subjectively feel is also very important. These feelings may or may not be connected to the frequency of events. With potentially lethal events, the threat thereof may suffice in terms of subjective, normative, and emotional reactions. This makes sense. No one wants to send their children to a school that has weapons or have their children come home saying they have seen weapons in the classroom or hallway. Principals would not find this acceptable and would likely act swiftly to address such an issue.

We agree with our colleagues (e.g., Nekvasil et al., 2015) that weapons are a much more lethal and serious issue in communities and homes than in schools. This contrast between schools, homes, and communities, however, is not the only way to determine or conclude if schools are safe or not. For example, although schools may

have lower rates of weapon carrying and injury by weapons than other contexts, students may be aware of more weapons and fear them compared to other contexts.

As shown in this chapter, about 24% to 30% of students in California are aware of weapons on school grounds. A sizable proportion has been threatened by weapons. These types of potentially severe or threatening events may also trigger subjective judgments of the school as an unsafe place. Another important issue to consider is societal expectations about schools that may be different than other contexts. Children are mandated to attend school. Society has strong expectations that this setting be highly secure and safe. Finally, our norms regarding weapons may have changed during the past decades, from a proportional way of understanding them (i.e., accepting certain levels as tolerable) to the expectation that schools be free of weapons. This may be true even if the community or individual homes have much higher rates of weapon use or exposure compared with schools. Therefore, we argue that reductions of weapon experiences on school grounds should be treated independently of other contexts; our expectations of schools are higher compared to other contexts. One context does not need to be pitted against another to determine its level of safety. Objectively and subjectively speaking, very few threats, exposures to weapons, or events involving weapons may make a school feel unsafe—even if the community has more weapon-related events than the school in the same community.

For example, a school that has three events involving weapon threats in two years has half the rate of a school that experienced six threats. Yet we cannot claim that one school is necessarily half as safe the other. Although numerically this may be true, from a qualitative norm perspective, some educators may believe that even one threat with a knife on school grounds may be sufficient to unnerve students, teachers, and parents. The subjective assessment of how a school is experienced may not be proportional issue (e.g., what percentage of students see, sense, and experience weapon-related behaviors) or even related to an absolute numbers of severe events. The potential severity of the events may matter more.

Thus a comparison between schools and neighborhoods regarding their prevalence of severe events may not be useful to convince the public that there is moral panic or distortions of safety on different school grounds. Including both a wide array of weapon-related experiences on school grounds, including threats with weapons, carrying weapons, and knowledge of or seeing weapons, will help researchers and policymakers better understand how weapons affect the school context.

As indicated by our findings reported in this chapter, we think a public health approach would be useful at the school level. Identifying schools that have multiple weapon-related experiences (knowledge of, carrying, threatening, etc.) and developing interventions specifically to prevent these weapons and behaviors would be an important next step for researchers and policymakers. This can be facilitated by surveys (such as the CHKS and YRBS) that ask such questions. These surveys are anonymous and done on a regular basis. We think a public health approach focused on reducing weapons in the community and schools (not just social and emotional learning or bullying issues) may hold greater promise than zero-tolerance approaches

that are historically associated with many negative consequences (see American Psychological Association [APA] Zero Tolerance Task Force, 2008; Mallett, 2017).

We think that policies regarding weapons have changed, along with weapon-related norms. Good research documenting the spread of policy, procedures, funding, and effectiveness of weapon reductions over time is lacking. These types of studies are sorely needed. How the public in countries around the world views issues of weapons in schools is also an area of research that needs development. Most policy research has focused on zero tolerance regarding weapons.

Zero tolerance is the policy associated most with the prevention of weapons on school grounds. In the early 1990s, even before the mass shooting in Columbine, Colorado, concern about gun violence led to the federal Gun-Free Schools Act of 1994, which withheld educational funding from states that did not adopt zero-tolerance laws that essentially mandated expelling for at least one year students who brought a firearm to school and referring them to the juvenile criminal justice system. As several authors have shown, throughout the years, states and school districts significantly expanded the original firearm focus of zero-tolerance policies, adding a wide range of behaviors such as ordinary schoolyard fights, verbal abuse, possession of tobacco or alcohol, chronic tardiness, and prolonged absenteeism (e.g., Skiba & Rausch, 2006; Sughrue, 2003).

Although there is wide agreement that weapons should not be present on school grounds and students should be protected from lethal weapons, there is emerging consensus that zero-tolerance policies, in their present form, are ineffective and have many unintended negative consequences. As an APA Zero Tolerance Task Force (2008) concluded, there is little evidence that these policies increase safety and reduce victimization. At the same time, evidence indicates these policies target certain vulnerable groups (such as minority students and students in poor schools), much more than could be explained by their behaviors, strongly suggesting that educators are biased toward these groups (APA Zero Tolerance Task Force, 2008).

Another related concern is that the link between schools and the criminal justice system reinforces the school-to-prison pipeline, a process that results in a large number of vulnerable students being deprived of education and entering the justice system at early age. Although the APA Zero Tolerance Task Force concluded in 2008 that the majority of research on the school-to-prison pipeline is currently anecdotal or descriptive, more recent reviews of this issue are more conclusive. For instance, a recent review in *Social Work Journal* (McCarter, 2017) concluded that exclusionary discipline increases students' likelihood of becoming involved with the justice system.

Given the wealth of information on zero-tolerance policies, our knowledge of school climate, victimization and weapons in school, and our personal and professional values, we suggest the following principles.

First, the underlying premise is that students should not be exposed to weapons in school. We include all kinds of weapons and the whole range of exposure, from hearing about or seeing a weapon on school grounds to any type of victimization, including threats and thwarted attacks. We suggest that much more attention needs

to be given to the everyday weapon-related experiences of many students in most schools in the country. Our focus should be reducing the presence of all kinds of weapons in school and the effect these weapons have on all students, irrespective of whether these weapons are ever used.

Second, addressing weapon-related issues requires various approaches and methods that are gradual, sequential in nature, and reflect the seriousness of weapon involvement:

1. Building a positive school climate that includes both teacher support and fair and consistent rules (“authoritative climate”; Cornell, Huang, et al., 2016; Cornell & Mayer, 2010; Cornell, Shukla, & Konold, 2016) will help build trust and safety, reduce the number of students who feel the need to bring weapons for self-defense, and increase the effectiveness of methods such as tip lines.
2. School leaders should employ fair and consistent discretion in responding to weapon involvement, taking into account factors such as the gravity of the offense, recidivism, and any mitigating circumstances.
3. A wide array of responses is needed, ranging from ongoing educational interventions (such as class discussions of the perils of weapons on school grounds), counseling, restorative justice measures implemented as part of school policies, suspensions, expulsions, and referrals to the justice system.
4. Local monitoring of school responses and their association with student and family characteristics (e.g., poverty, special needs, minority status) and the circumstances of the event should accompany the implementation of disciplinary policies to ensure that they are fair and consistent.
5. Professional development regarding fair and effective disciplinary responses should be integrated into the implementation of disciplinary processes.

Third, students’ voices are critical. Schools need to listen carefully to their students, so that they can inform local leadership regarding their experiences in school. Reports on seeing a weapon on school or hearing a rumor about the presence of a weapon on school grounds could serve as early warning signs and a call to action. Such reports could be made through anonymous school-based surveys like the CHKS in California and local YRBS surveys in other locations.

Another effective tool may be anonymous tip or hotlines that provide students and staff members with opportunities to report on weapon-related and other dangerous behaviors in school, before they lead to physical victimization. Evidence indicates that in schools that are able to create good and trusting relationships between students and the staff, students are more forthcoming in sharing what they know, despite their concerns of being considered “tattlers.” There are also indications that students are willing to report to anonymous tip lines. Mapping of dangerous places on school grounds (Astor & Benbenishty, 2018; Astor, Benbenishty, & Meyer, 2004) may also provide rich information on students’ experiences with weapons and other dangerous places and circumstances in school. With all these methods, it is essential to use the information received from students and share with them how their voices informed policy.

Fourth, students who are expelled should not be abandoned. The school district (or the county) needs to develop appropriate educational responses (such as alternative schools) to ensure that students who are expelled are integrated into an alternative educational framework. These educational facilities should aim to support them while they are expelled and prepare them to reintegrate with the regular school system, whenever possible. Accountability systems need to include this group of extremely vulnerable group of students to ensure that they are part of the educational system and are expected to make progress academically and in noncognitive skills.

Fifth, schools that are overwhelmed by an inordinate amount of weapon-related issues need to be supported. These schools

1. Should receive additional resources. These resources may include funding to improve physical facilities, additional training for educational staff members, and increased availability of pupil personnel such as social workers and counselors.
2. Should enhance afterschool educational and positive recreational opportunities for their students. Whenever possible and appropriate, they should include opportunities to work and supplement family income in jobs with a future.
3. Should become part of community partnerships that bring together all stakeholders in the community, including parents, advocacy groups, law enforcement, social services, and business, to help reduce the presence of weapons in the neighborhood and school.

SUMMARY

Current Preoccupation with Mass Shootings

1. Columbine, Sandy Hook, and other mass school shootings of the past decade are having a major impact on the public discourse, policies, funding, and legislation.
2. This public policy and academic preoccupation with weapons only used in (mass) shootings, to the almost total neglect of other types of weapon awareness or involvement, is not productive.
3. We suggest that research should cover a wider range of weapons, in addition to firearms, and multiple behaviors. These include being threatened or injured by a weapon, seeing a weapon carried by another student, or hearing rumors that weapons are on school grounds.

Gangs in Schools and Weapons

1. Existing research has indicated that students involved in bullying, and especially bully-victims, are also more prone to be involved with weapons.

2. This draws attention to one of the most glaring gaps in research—overlooking the role that gangs and gang membership play in the prevalence and impact of weapons in school.

A Case Example from California

Between 2011 and 2013, about 4% of California secondary school students brought a gun on school grounds. This translates to an estimated minimum of 100,000 guns brought to school grounds during this period. Additionally, approximately 7% were threatened or injured by a weapon on school grounds (an estimated 175,000 students) and about a quarter of all secondary school students reported having seen a weapon on school grounds (an estimated 625,000 students).

School-Level Analyses

1. From a policy perspective, it is important to know whether most schools in California have similar levels of weapon carrying or, in contrast, most weapons carried to high schools in California are brought to a very small number of schools, whereas all other schools are almost free of weapon involvement.
2. The findings indicate the importance of a school-level view of weapons. For instance, 10.2% of secondary schools in California had no reports of students carrying a gun to school, whereas in 3.3% of schools, 15% or more of the students reported carrying a gun to school.
3. Multivariate analysis of student-level characteristics indicated that although some student characteristics were associated with weapon involvement, student background, ethnicity, gender, and grade contributed a very small proportion of the overall explained variance in weapon involvement. Being a member of gang and victimized severely were strongly associated with weapon involvement.
4. School-level analyses revealed many differences when compared to the student level. For example, although the ethnicity of individual students was associated very weakly (or not at all) with their involvement with weapons, at the school level, schools with more African American and Hispanic students had more reports of weapon involvement. Also, school-level reports on gang involvement and severe victimization correlated with weapon-related reports much higher than at the student level. Most interestingly, whereas student-level correlations of perceptions of safety, teacher support, and participation with weapon issues were low, they were quite high at the school level.
5. The proportion of gang members in school was a strong predictor of levels of weapon involvement in school.

Implications for Future Research

1. We recommend that reports do not overlook incidents of thwarted and failed attempts to cause harm. As researchers, we do not know how many potentially lethal events were thwarted or unsuccessful.
2. Overlooking nonlethal weapon-related victimization may increase the chances that lethal weapon violence will take place.
3. We do know that weapons are present on school grounds in many schools. Nevertheless, there seems to be little or no apparent organized response and practices to use these data to identify dangerous schools and use student reports as red flags that could prevent future weapon-related escalation.
4. More research needs to be devoted to understanding the directionality of the associations we found and the causal mechanisms that lead to bringing different types of weapons to school, using them to threaten or injure students on school grounds, and seeing or knowing about weapons in school.

A Public Health Approach, Zero Tolerance, and Weapons in Schools

1. We strongly suggest adopting a school-focused public health strategy when researching, understanding, and addressing the problem.
2. How students, teachers, parents, community members, and administrators subjectively feel is very important. These feelings may or may not be connected to the frequency of events.
3. Identifying schools that have multiple weapon-related experiences (knowing, bringing, threatening, etc.) and developing interventions specifically to prevent these weapons and behaviors is an important next step for researchers and policymakers.
4. Research documenting the spread of policy, procedures, funding, and effectiveness of weapon reductions over time is needed. How the public in countries around the world views issues of weapons in schools is also an area of research that needs development.
5. A wide range of responses need to be developed, ranging from ongoing educational interventions (such as class discussions of the perils of weapons on school grounds), counseling, and restorative justice measures implemented as part of school policies to suspensions, expulsions, and referrals to the justice system.
6. Local monitoring of responses and their association with student and family characteristics (e.g., poverty, special needs, minority status) should accompany the implementation of disciplinary policies to ensure that they are fair and consistent.