

CARRYING AND USING WEAPONS:
A SURVEY OF URBAN MINORITY JUNIOR HIGH
SCHOOL STUDENTS*

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Running Head: Weapon experience among urban minority adolescents

WORDS IN TEXT:1790

TABLES: 3

KEY WORDS: Adolescents, Weapons, Antisocial Behaviors

Note: This is an Internet version of the paper printed in the American Journal of Public Health, April 1996, v86, n4.

ABSTRACT

To explore weapon carrying among young, inner-city adolescents, a survey was administered in fall 1993 to 2005 predominantly Hispanic students (mean age = 12.8) in three New York City junior high schools. The survey revealed that 21% of the students reported personally carrying a weapon; guns and knives were the weapons most commonly carried. Forty-two percent indicated that a family member or close friend had ever been shot. Boys and older students were more likely to report carrying weapons. Preventive efforts may need to begin before or on entry into junior high school rather than high school.

INTRODUCTION

Violence is the major cause of mortality among American youth, with accidents, suicide, and homicide accounting for 75% of all adolescent deaths (1). Minority youth are disproportionately represented among deaths from suicide and homicide. Over one-third (36%) of all deaths among Hispanic youth are caused by homicide and suicide, versus one-fifth (22%) for similarly aged whites (2). The overall death rate for black youth is twice that of whites, and whereas the leading cause of death among adolescent whites is accidents, the leading cause of death among teenage blacks is homicide (3). Firearms play a key role in these grim statistics. They are the leading means of homicide for these

young victims (4), and the presence of a handgun in the home greatly increases the risk that someone who lives there will be killed (5).

Several studies have investigated access to and availability of weapons (particularly guns) among high school students (6-8). Far less is known about the weapon experience of younger adolescents, although it has been suggested that an adolescent's first experience with weapons may be as early as 12 of age (9). No literature is available about young, minority, adolescent involvement with weapons. The data presented in this paper begins to document the weapon experience of younger, minority, inner-city adolescents, and may help to guide the timing and content of violence prevention programs.

METHODS

Procedure: In the fall of 1993 a two-page anonymous questionnaire was administered by trained staff members to 2005 seventh- and eighth-grade students (70% of the eligible) in three junior high schools in a New York City school district. As in many other inner city neighborhoods, the area served by these schools is marked by higher rates of poverty, population density, overcrowded housing, and overall lower reading and math scores (10).

Surveys were distributed and collected by trained staff members in a regular classroom setting during school, and were typically completed in 15 minutes. Because administration of this

survey was considered to be part of a regular school program, active parental consent was not required for students' participation in the survey. However, consent forms were sent to the parents/guardians explaining the purpose of the survey, and to give them the opportunity to request that their children not participate in the survey. Approximately 5% of parents/guardians refused to allow their children to participate and approximately 25% of students were absent on the day the survey was administered.

Because of the sensitive nature of the subject matter, students were asked not to put their names on the survey. Survey proctors verbally explained both the term "anonymous" and the purpose of the survey. Although the survey was judged by the research team to be on a reading level appropriate for the study population, questions and response options were read aloud as the students filled out the survey to help eliminate reading comprehension bias. Students could choose to complete either a Spanish or English language version of the survey; approximately 35% chose the Spanish language version.

Measurements: Students were asked to complete one item each pertaining to gender, age, and race/ethnicity. Students were also asked to complete four items pertaining to their friends' weapon experience, five items about their own lifetime weapon experience, and three items about accessibility and exposure to weapons and violence. All items had forced choice response options.

Descriptive statistics were calculated (by age and gender, where appropriate), Odds Ratios and 95 percent confidence intervals (11) were computed to illustrate bivariate relationships, and logistic regression (12) was used to help examine the observed associations.

RESULTS

The mean age of participants was 12.8 years (s.d. 0.9 years; range 11 to 15 years); 53.2% were male. The racial/ethnic distribution of participants was 80.0% Dominican, 6.3% other Hispanic, 4.3% black, and 9.4% other. The demographic characteristics of participating students closely mirrored those of the entire eligible population.

Presented in Table 1 is the wording, response options, the proportion responding to each category for all survey items, and a 95% confidence interval (CI) for each proportion. Some highlighted results from Table 1 are as follows: One fifth of all respondents reported that they had ever carried a weapon; about half of weapons carriers (10% of all respondents) indicated that they carried a knife, and a quarter (5% of all respondents) reported that they carried a gun; one tenth of all students reported that someone living with them had a gun, and one third indicated that they had a close relative (not living with them) who had a gun; and approximately two fifths indicated that a close friend or family member had been shot.

For both respondents and their friends, when a gun was reported as the weapon carried, buying the weapon was the most common method of acquisition.

As presented in Table 2, boys were significantly more likely than girls to report that their friends ever carried a weapon and to report carrying a weapon themselves (except for the box cutter category). Also presented in Table 2 are the age differences. The chi-squared test for linear trend (11) indicated a significant increase in perception and in usage for all but the knife and box cutter categories.

The gender and age differences were also investigated with logistic regression. In these analyses, each item in Table 2 was regressed onto a binary gender variable (male vs female) and then onto an ordinal age variable. The results of these analyses are also included in Table 2. Of particular interest, for every unit increase in year of age, weapon carrying odds increased by 1.7 so that the odds of carrying a weapon as a 15-year-old were 8.3 times greater (95% CI=4.6, 11.7) than the odds for an 11-year-old. Similarly, for every year increase, the odds of carrying a gun increased by 2.4 so that the odds of carrying a gun as a 15-year-old were 33.2 times greater (95% CI=13.0, 80.9) than the odds for an 11-year-old.

The associations between weapon carrying and weapon accessibility / availability, weapon use, and knowing someone who was shot were also explored. Thus, those respondents who reported having a gun in the house were 4.7 (95% CI 3.5, 6.5) times more likely, those who reported that a close friend or family member

had been shot were 2.7 (95% CI 2.1, 3.5) times more likely, and those who indicated that their friends carried a weapon were 16.0 (95% CI 11.8, 20.5) times more likely to carry a weapon themselves. Finally, those that said they personally carried any weapon were 9.0 (95% CI 6.7, 12.1) times more likely, and those who had a close friend or relative who had been shot were 2.8 (95% CI 2.1, 3.6) times more likely to say that they had used a weapon on someone.

DISCUSSION

This is the first investigation to examine the weapon experience of predominantly Hispanic, inner-city junior high school students. The implications of these findings must be viewed in light of a number of methodological considerations. First, the findings from this survey may not be generalizable to students with different demographic characteristics, or to students who are habitually absent from school. Other research has suggested that those students habitually absent from school have higher rates of other anti-social behaviors (13). The present findings, therefore, may be an underestimate of weapon carrying and weapon use among all junior high school aged youth.

Second, the self-report nature of the survey may introduce a reporting bias in responses. Although the anonymous nature of the survey was explicitly presented to the students as part of the standardized protocol (in order to help elicit honest responses

and to minimize bias), and that similar prevalences obtained by others support our findings (14), we cannot rule out an under- or over-reporting bias. Additionally, because the survey was anonymous, assessing the validity of student responses is problematic. As such, the psychometric properties of this instrument are unknown.

A final consideration is that because the associations reported are from cross-sectional data, directionality nor causation should be inferred.

Although this sample is not necessarily representative of the Hispanic community from which it was drawn, these results may provide insight into the youth of the fastest growing immigrant group in New York City. From 1983 to 1989, New York City absorbed nearly 685,000 legal immigrants; approximately 105,000 of these from the Dominican Republic (15). Sixty-one percent of all Dominican immigrants come to New York City, and their most likely destination is an area in northern Manhattan known as Washington Heights. This area has a growth rate double that of New York City as a whole, and is now more than two-thirds Hispanic. This fast growing immigrant group may also be slower to acclimate into mainstream American culture. For instance, the naturalization rate among eligible Dominican immigrants in 1989 was only 18%

The results from this survey are particularly striking when compared to national rates. The 1990 national Youth Risk Behavior Survey (YRBS) of 11,631 high school students found that overall, 19.6% of students had carried a weapon in the past month (16), and the 1993 administration of the same survey among 16,296 high

school students suggested a slight increase in carrying rates to 22.1% among all students (17). However, among Hispanic students only, the corresponding rates for the 1990 and 1993 YRBS administrations were 25.8% and 24.4% respectively. In addition, a 1992 administration of the YRBS among 1,399 students in 27 New York City high schools revealed that 21% of all students had carried a weapon in the past month (18). Among our much younger sample of predominantly Hispanic junior high school students, 20% overall had carried a weapon in their lifetime, and that there was a substantial linear trend in use after entry into junior high school such that by age 14, 31% had ever carried a weapon. Although the time frame and age group for the rates from the YRBS are not directly comparable to our results, it is clear that these young adolescents have already had substantial weapon carrying experience.

This fast growing, understudied population then, may need increased attention and intervention if the nation is to reach one of its major health objectives for the year 2000: to reduce weapon carrying by 20% among adolescents aged 14-17 (16). These data also indicate that the first year upon entry to junior high may be most critical in forming their subsequent weapon experience. Thirteen percent of 11-year-olds in this study perceive that their friends carry weapons, yet only 5% of students report actually doing so. By the following year however, the percentage of 12-year-olds carrying weapons matches the prior years' perception of friends level of weapon carrying, and perception of friends involvement substantially increases. This pattern continues until

the last year of junior high school when either weapon carrying rates level off, or those most at risk have left school.

Similarly, reported weapon use started out relatively low upon entry to junior high school but effectively doubled each year before leveling off at 14 years of age, for perhaps the same reason.

Educating adolescents as early in their school experience as possible then seems key. Some violence prevention curricula exist, focusing primarily on conflict resolution alternatives (19,20). Others have suggested reasonable additional measures to make schools safer, such as establishing patrols in and around school during arrival and departure, installing metal detectors in schools, training school security guards and parents in alternative methods of dealing with aggressive youths, providing additional funding for school-based clinics, and enacting tougher gun control legislation (20,21). Such legislation is especially important because of the high rates of weapon possession and availability and the increasingly clear ecological association between weapon possession and violence (22-24).

However, the larger social and economic factors need to be addressed as well. Studies (4,25) have demonstrated that any observed race or ethnic differences in violence and/or homicide are attenuated when socioeconomic status (SES) is accounted for; "poverty" is the ultimate equalizer. In addition to SES, others have noted that violence tends to be concentrated in areas characterized by high population density, poor housing, lack of educational and economic opportunities, disintegration of the

family unit, and where the social institutions (including schools) are unable to meet the needs of the populations they serve (25,26).

We might begin then, by striving to insure that our schools become a safe haven for children. To help provide this environment it is critical that schools be used not only as the delivery vehicle for violence prevention messages, but also must help adolescents cope with the harmful emotional, social, and educational consequences resulting from extensive exposure to violence. Indeed, a growing body of evidence is beginning to establish a link between exposure to violence and the onset of posttraumatic stress disorder among adolescents (27,28). We also found that exposure to violence had a negative impact on these young people; those who knew a close friend or relative who had been shot were almost three times as likely to carry a weapon themselves and to use a weapon on someone.

CONCLUSION

A substantial proportion of the (primarily Hispanic) junior high school students we surveyed indicated that they had ever carried a weapon, rates increased considerably with age, and an alarming proportion reported that a family member or close friend had been shot. Our results suggest that primary and secondary prevention efforts be implemented prior to or during the first year of junior high school and be reinforced until graduation from high school.

In response to the sensible declaration that violence in America is a public health emergency (29), violence prevention needs to become a public health priority. We need to understand and change the social, cultural, and economic circumstances that foster violent behavior as well as educate a generation of children who might otherwise continue the pattern of weapon carrying. The consequences of ignoring this problem, as this and other studies have shown, is becoming frighteningly clear.

TABLE 1

RESPONSES (IN PERCENT) TO THE FALL 1993 ANONYMOUS WEAPON AND VIOLENCE EXPERIENCE SURVEY ITEMS

	<u>PERCENT (95% CI)</u>
Do <u>you</u> ever carry a weapon (% Yes, n=1944)	20.6 (± 3.3)
Among those indicating that they had ever carried a weapon (n=401):	
Where did you get the weapon?	
Bought it	28.1 (± 4.4)
Borrowed it	24.7 (± 4.2)
Stole it	5.2 (± 2.1)
Found it	14.8 (± 3.5)
Given to me	19.8 (± 3.9)
Other	7.4 (± 2.5)
Where do you most commonly carry the weapon?	
Late at night	35.8 (± 4.7)
Going to a different neighborhood	9.1 (± 2.8)
Going to school	4.4 (± 2.0)
When out for revenge	7.9 (± 2.6)
When hanging out	17.8 (± 1.9)
Always	11.1 (± 3.1)
Other	13.8 (± 3.4)
What kind of weapon do you carry?	
Gun	28.4 (± 4.4)
Knife	50.0 (± 4.9)
Club, bat or stick	7.2 (± 2.5)
Box-cutter (razor)	7.2 (± 2.5)
Screwdriver	0.5 (± 0.7)
Other	6.7 (± 2.5)
Friends ever carry weapon (% Yes, n=1973)	35.6 (± 2.1)

(continued on next page)

**Among those who thought friends ever carried a weapon:
(n=702)**

Where did friends get the weapon?

Bought it	34.7	(± 3.5)
Borrowed it	5.5	(± 1.7)
Stole it	8.1	(± 2.0)
Found it	3.1	(± 1.3)
Given to them	9.4	(± 2.1)
Don't really know	37.7	(± 3.6)
Other	1.5	(± 0.9)

Where do friends most commonly carry the weapon?

Late at night	27.9	(± 3.3)
Going to a different neighborhood	11.2	(± 2.3)
Going to school	7.7	(± 1.9)
When out for revenge	8.0	(± 2.0)
When hanging out	13.5	(± 2.5)
Always	20.8	(± 3.0)
Other	10.9	(± 2.2)

What kind of weapon do you think your friends carry?

Gun	41.3	(± 3.6)
Knife	38.1	(± 3.6)
Club, bat or stick	3.3	(± 1.3)
Box-cutter (razor)	4.5	(± 1.5)
Screwdriver	0.3	(± 0.4)
Don't know	7.7	(± 1.9)
Other	4.8	(± 1.6)

All respondents (n=1949†):

Have you ever used a weapon on someone?		
No	80.6	(± 2.0)
Yes, when I was protecting myself or someone else	10.3	(± 1.5)
Yes, when I jumped them	2.7	(± 0.8)
Yes, when I was just fooling around	3.8	(± 0.9)
Yes, other	2.6	(± 0.8)
Does someone in your house have a gun? (% Yes)	11.0	(± 1.4)
Do you have a close relative (not living with you) that has a gun? (% Yes)	33.9	(± 2.1)
Have any of your close friends or anyone in your family ever been shot? (% Yes)	41.5	(± 2.2)

† n's vary due to missing values

TABLE 2

AGE AND GENDER DIFFERENCES IN THE PROPORTION OF RESPONDENTS ANSWERING AFFIRMATIVELY TO WEAPON

CARRYING/USAGE ITEMS (N=2005†)^a

	MALE	FEMALE	OR (95% CI) (Male vs. Female)	AGE					OR (95% CI) per year of age
				11	12	13	14	15	
Student personally ever carries a weapon	27.5	12.5***	2.6 (2.1, 3.4)	5.0	13.7	21.0	31.6	28.2***	1.7 (1.4, 1.9)
Carried a gun vs all other types of weapons	9.0	3.4***	2.8 (1.8, 4.3)	0.0	2.8	4.8	14.2	19.5***	2.4 (1.9, 3.0)
Carried a knife vs all other types of weapons	14.1	6.9***	2.2 (1.6, 3.0)	0.0	1.6	1.7	3.3	0.0	1.2 (1.0, 1.4)
Carried a boxcutter vs. all other types of weapons	2.5	1.3	2.0 (1.0, 3.9)	6.0	8.7	11.4	13.9	7.3	1.3 (0.9, 2.0)
Student ever used a weapon on someone else	24.0	14.0***	2.0 (1.5, 2.6)	6.5	12.8	20.4	28.0	28.1***	1.6 (1.3, 1.8)
Friends carry a weapon	40.0	29.3***	1.7 (1.4, 2.0)	13.1	27.6	37.5	46.5	39.0***	1.5 (1.3, 1.7)

† Numbers may vary due to missing values.

^aTests of significance for gender differences were conducted using the Pearson ², whereas tests of significance for age differences were conducted using the ² test for trend.

***p<.001

TABLE 3

ASSOCIATION ESTIMATES (ODDS RATIOS, WITH 95% CONFIDENCE INTERVALS)
BETWEEN WEAPON AVAILABILITY AND WEAPON CARRYING, AND BETWEEN
WEAPON CARRYING AND WEAPON USE

	EVER CARRY WEAPON (PERSONAL)	EVER USE WEAPON ON SOMEONE
Gun in the house (Yes vs No)	4.7 (3.5, 6.5)	--
Friend carries weapon (Yes vs No)	16.0 (11.8, 20.5)	--
Carry any weapon (Yes vs No)	--	9.0 (6.7, 12.1)
Carry gun (Gun vs other weapon)	--	3.1 (1.8, 4.9)

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