Research Papers

A Preliminary Investigation of Inner City Adolescents' Perceptions of Guns

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ABSTRACT: Three hundred seventy-seven African-American and 201 white adolescents, primarily of low socioeconomic status, were surveyed on perceptions of guns. Chi-square analyses found significant differences by gender and ethnicity. African-American males were more likely to have a pistol at home (47%); both African-American males and females were more likely to have known someone who took a gun to school (57% and 47%) and to have personally known someone who had been shot (87% and 91%). Differences between African-American and white adolescents and between males and females regarding gun control, gun safety, and consequences of gun use are described. (J Sch Health. 1991;61(6):255-259)

The homicide rate for U.S. teen-agers is higher than any other country. Homicide is the third leading cause of death for American teen-agers, and among young African-American males homicide is the leading cause of death. In 1986, the homicide rate for males ages 15-19 (15.1 per 100,000) was more than three times higher than the rate for females (4.7 per 100,000). The rate for African-American males (51.5) was about six times that of white males (8.6), whereas for African-American females the rate (12.1) was nearly four times that for white females (3.3).²

In addition to the high mortality rate from homicide, the second leading cause of death for U.S. teenagers is suicide. In 1986, the suicide rate for white males (18.2 per 100,000) was two and one-half times that of African-American males (7.0), and the rate for white females (4.1) was almost double the rate for African-American females (2.1).²

An unusually large proportion of homicides and suicides in the U.S. is attributed to firearms.^{3,4} Of 1,838 homicide deaths among teen-agers ages 15-19 in 1986, 71% were firearm related; among African-American males, 83% of homicide deaths were firearm related. Furthermore, 60% of suicide deaths among white males ages 15-19 resulted from firearms.² Suicide is the fourth leading cause of death among African-American male teen-agers, 71% of which is due to firearms.

Firearms are pervasive in America. At least 70 million Americans (or half of all homes) own about 200 million firearms, of which about 60 million are hand-

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guns.⁵⁻⁷ Individuals most likely to be victims of firearms are family members of those who possess a gun, male adolescents and young adults, the poor, those who misuse alcohol, and those who have a propensity for getting into physical altercations.⁸⁻¹⁰ To adequately educate adolescents concerning firearm injuries and deaths, it is important to know their perceptions concerning firearms. A comprehensive literature review identified studies that examined adults' perceptions of guns,¹¹ but no study was found specifically examining adolescents' perceptions of guns. In this study, young, primarily low socioeconomic, African-American and white inner city adolescents' perceptions of guns and their effects were examined.

METHODS

Participants

Eight hundred twelve high school students from five midwestern, inner-city public high schools participated. All urban schools located in low socioeconomic status districts in a large midwestern town (pop. 500,000) were included in the sample. Data were collected in spring 1989 from students in the health education classes of the respective schools. The classes were required of students for graduation and the teachers were enthusiastic about the study. Teacher enthusiasm contributed to the high participation rate.

Instrumentation

Based on a comprehensive review of literature on guns, a 48-item questionnaire was developed to assess perceptions of guns and their effects. The questionnaire consisted of three demographic variables (age, gender, ethnicity), nine background items such as "do you own your own gun?," and 36 items on guns and their effects. The 36 items specifically on guns had a five-point Likert-type scale, strongly agree (5) to strongly disagree (1), as a response format.

Questionnaire internal reliability, assessed by Cronbach alpha, was .79. A sample of 25 high school students from one of the aforementioned schools was given the questionnaire twice (one week apart) to estimate stability reliability; it was found to be .82.

Table 1

Adolescents' Perceptions of Gun Control and Safety by Ethnicity

ltem	% Agree*		% Disagree		% Not Sure	
	African- American	White	African- American	White	African- American	White
Most homes in America have guns.	65	56	8	6	28	38
Americans own more guns per person than any other people in the world.	36	30	19	17	45	54
believe guns are too easy to get.	69	53	12	16	19	31**
I believe it is the right of every adult to have a gun if they want one.	63	60	20	26	17	15
I believe there should be a ban on the sale and ownership of pistols.	25	26	49	53	27	21
To own a gun a person should have a license for the gun.	80	84	12	7	8	9
I would be in favor of a 21-day waiting period before a gun could be bought.	64	72	16	10	21	18
Banning ownership of handguns would be more unfair to the poor since they are more likely to be victims of crime.	36	23	23	30	41	47**
A law banning handguns would not work since most people who have them would not turn them in.	64	68	11	7	25	25
People who have been found guilty of a serious crime should not be allowed to own a gun.	62	71	20	15	18	14
People who commit a crime and use a gun should get a longer jail sentence than people who commit the same crime without a gun.	44	44	32	27	24	29
If you own a gun and want to sell it, you should have to sell it through a gun dealer.	72	72	14	13	14	15
If the police did a better job of protecting people, we would not need to have guns at home	63	52	21	27	16	22
If someone tries to rob you with a gun you should <i>not</i> try to fight them or take their gun; you should cooperate.	66	67	18	17	16	16
There is no safe place to keep a pistol in the home if there are children in the home.	52	50	34	38	14	12
Gun safety training should be offered in the schools.	45	47	35	30	20	24
I believe gun detectors should be in every doorway of our school.	53	40	32	37	16	23**
There are too many other important health problems to spend much time and money attempting to solve the gun control problem.	!	41	23	23	30	36

^{*} On a five-point scale, Agree = 5 or 4; Not Sure = 3; Disagree = 2 or 1.

RESULTS

Eight hundred twelve students were requested to complete the gun questionnaire and 725 returned the questionnaire (89%). However, data analysis was completed on only the 377 African-American and 201 white students who responded. Hispanic and Asian students (n = 72) and those who did not complete a major

Table 2
Adolescents' Perceptions of the Consequences of Guns by Ethnicity

	% Agree*		% Disagree		% Not Sure	
item	African- American	White	African- American	White	African- American	White
l believe that if there were fewer guns there would be less crime.	44	45	38	33	18	22
If pistols were banned from sale there would be fewer people shot by criminals.	45	47	28	28	27	26
Having a gun at home will help protect you and your family from criminals.	67	62	15	22	18	15
A handgun purchased for self- defense is more likely to be used on another family member than on a criminal.	36	36	29	31	35	33
Having a gun around the house makes me feel safe.	54	42	22	36	24	22**
If you have a gun people will not bother you.	28	26	49	49	23	26
Americans are more likely to be shot and killed than are people in any other major country in the world.	35	26	30	25	35	50**
Most people who are shot and killed are killed as the result of arguments and fights.	78	78	9	4	13	19
Most people are shot by people they do not know.	45	44	32	23	24	33
Guns are the leading method of suicide for teen-agers.	29	31	34	31	37	39
Women are more likely to be shot and killed than men.	10	13	57	51	32	36
Wives who are abused by their husbands are much more likely to be shot and killed than are wives who are not abused.	43	43	21	12	36	44
Husbands of poor families are more likely to shoot and kill their wives than the husbands of families with more money.	20	18	45	36	35	46
People who live in poverty are more likely to be shot and killed than are people with more money.	26	27	41	38	33	35
Most African-Americans who are shot and killed are shot by other African-Americans.	66	41	14	17	20	42**
Most whites who are shot and killed are shot by other whites.	26	20	30	27	44	53
Most African-American males who are shot and killed are killed by police officers.	31	16	34	36	36	49**
African-American males are more likely to be shot and killed than any other group of people	. 58	36	26	28	16	36**

^{*} On a five-point scale, Agree = 5 or 4; Not Sure = 3; Disagree = 2 or 1.

^{**} p < .01

N = 377 African-Americans, 202 whites

^{**} p < .01

N = 377 African-Americans, 202 whites

portion of the questionnaire (n = 75) were excluded from final analysis. Chi-square analysis found no significant difference in gender by ethnicity (African-Americans = 181 males and 196 females; whites = 105 males and 97 females). A t-test used to examine differences in age by ethnicity also was not significant (Afri-

Table 3 Adolescents' Perceptions of Gun Control and Safety by Gender

	% Agree*		% Disagree		% Not Sure	
ltem	Male	Female	Male	Female	Male	Female
Most homes in America have guns.	64	59	6	7	29	34
Americans own more guns per person than any other people in the world.	38	29	20	17	42	54
l believe guns are too easy to get.	64	62	17	10	18	27**
I believe it is the right of every adult to have a gun if they want one.	68	55	18	27	14	18**
I believe there should be a ban on the sale and ownership of pistols.	21	29	57	43	22	27*
To own a gun a person should have a license for the gun.	75	87	15	6	10	7**
I would be in favor of a 21-day waiting period before a gun could be bought.	61	72	20	8	19	20**
Banning ownership of handguns would be more unfair to the poor since they are more likely to be victims of crime.	36	28	27	24	37	48
A law banning handguns would not work since most people who have them would not turn them in.	64	67	13	6	22	27
People who have been found guilty of a serious crime should not be allowed to own a gun.	62	68	22	15	16	17
People who commit a crime and use a gun should get a longer jail sentence than people who commit the same crime without a gun.	47	41	28	33	25	26
If you own a gun and want to sell it, you should have to sell it through a gun dealer.	66	78	19	8	15	14**
If the police did a better job of protecting people, we would not need to have guns at home	57	60	24	21	19	18
If someone tries to rob you with a gun you should <i>not</i> try to fight them or take their gun; you should cooperate.	55	78	25	10	20	12**
There is no safe place to keep a pistol in the home if there are children in the home.	41	62	44	27	15	11**
Gun safety training should be offered in the schools.	50	42	29	36	21	22
I believe gun detectors should be in every doorway of our school.	46	50	36	30	18	19
There are too many other important health problems to spend much time and money attempting to solve the gun control problem.	52	38	18	28	30	34**

On a five-point scale, Agree = 5 or 4; Not Sure = 3; Disagree = 2 or 1.

can-Americans M = 15.86 years, SD = 0.82; whites M = 15.89 years, SD = 0.93; range 14-18 years).

An examination of background variables by ethnicity for males using chi-square analysis found four significant (p < .05) differences. African-American males were more likely to have a pistol at home (47% vs. 34%), less likely to have a shotgun at home (32% vs. 48%), more likely to have known someone who took a gun to school (57% vs. 43%), and more likely to have personally known someone who had been shot (87% vs. 68%). Significant differences were not found for African-American vs. white males for the following background variables: prevalence of a rifle at home (21% vs. 29%), no gun at home (40% for both groups), owning their own gun (26% vs. 36%), having fired a gun (71% vs. 74%), or having a gun pulled on them (37% vs. 30%).

An examination of background variables by ethnicity for females found five significant (p < .05) differences. African-American females were less likely to have a rifle at home (12\% vs. 27\%), less likely to have a shotgun at home (9\% vs. 20\%), less likely to have fired a gun (22\%) vs. 38%), more likely to have known someone who took a gun to school (47% vs. 30%), and more likely to have personally known someone who had been shot (91% vs. 68%). Significant differences were not found for African-American vs. white females for the following background variables: prevalence of a pistol at home (25% vs. 21%), not having a gun at home (67% vs. 61%), owning their own gun (2% vs. 4%), or having a gun pulled on them (10% vs. 11%).

The ANOVA for the interaction of gender by ethnicity for the 36 gun items was not significant. The ANOVA for ethnicity by the 36 gun items was significant (p < .01). An examination of subsequent chisquare tests found eight items were significant (p < .01)(Tables 1 and 2). African-American adolescents were more likely than white adolescents to believe that guns are too easy to get (69% vs. 53%), that banning ownership of handguns would be more unfair to the poor (36% vs. 23%), gun detectors should be in every doorway of their school (53% vs. 40%), having a gun around the house made them feel safe (54% vs. 42%), Americans are more likely to be shot and killed than are any other people (35% vs. 26%), most African-Americans who are shot and killed are shot by other African-American males (66% vs. 41%), most African-American males who are shot and killed are killed by police officers (31% vs. 16%), and that African-American males are more likely to be shot and killed than any other group of people (58% vs. 36%).

The ANOVA by gender for the 36 gun items also was significant (p < .01) An examination of subsequent chisquare tests found 11 items were significant (p < .01) (Tables 3 and 4). Male adolescents were more likely than females to believe it is the right of every adult to have a gun if they want one (68% vs. 55%), having a gun around the house made them feel safe (61% vs. 39%), if they had a gun people would not bother them (35% vs. 19%), and that there are too many other important health problems to spend much time or money on gun control (52% vs. 38%).

Females were more likely than males to believe there should be a ban on the sale and ownership of pistols

N = 377 African-Americans, 202 whites

(29% vs. 21%), people should have a license to own a gun (87% vs. 75%), be in favor of a 21-day waiting period before a gun could be bought (72% vs. 61%), to be able to sell guns only through a gun dealer (78% vs. 66%), if someone tries to rob you with a gun you should not try to fight him (78% vs. 55%), and there is no safe place to keep a pistol at home if children are present (62% vs. 41%).

DISCUSSION

Firearm mortality is the second leading cause of death among U.S. 15-19-year-olds.¹² Yet, no studies have specifically examined the perceptions of guns by those adolescents most at risk: inner-city, low income, African-American adolescents.

The data in this study on firearm ownership parallel that of a recent study on nonurban adolescent firearm ownership in a southeastern state. Sadowski et al¹³ found males were 12 times more likely than females to own guns and white males were more likely to own guns than were African-American males (56% vs. 20%). The current study found males were 13 times more likely than females to own guns and white males were more likely than African-American males to own guns (36% vs. 26%).

These findings suggest the demand for guns might be reduced if confidence in collective security was enhanced, especially if crime was reduced and police protection increased. The students claimed having a gun around the house made them feel safe, that it would protect them from criminals, and that if the police did a better job of protecting people they would not need to have guns at home.

Furthermore, most students in this study, regardless of ethnicity, believed guns are too easy to obtain and more gun control measures should be taken such as people should have licenses for their guns and there should be a 21-day waiting period before a gun is sold.

It is not surprising that 53% of African-American and 40% of white students believed there should be gun detectors in every school doorway. Perhaps the prevalence of guns in inner-city schools is greater than most adults realize. It was estimated in 1987 that 400,000 boys carried handguns to school; 135,000 of these boys carried guns to school on a daily basis.¹⁴ Obviously, guns and gun violence is a growing concern among administrators, educators, students, and parents. A recent study by Schubiner et al¹⁵ of inner city youth (ages 14-23) found 78% expressed fear of being the victim of a violent act, 42% had seen someone shot or knifed, and 22% had actually seen someone killed. It is surprising this study found that only 29% of youth carried a knife in the preceding three months, and 18% reported carrying a gun. Such a level of fear in adolescents is likely to result in defensive strategies such as carrying their own weapon or a tendency to flee such a threatening environment.

IMPLICATIONS

Schools, especially health educators, need to become more involved in the growing problem of guns and violence. First, increased public awareness is needed to help motivate actions to resolve this chronic public health problem. Second, schools need to become involved in teaching nonviolent problem-solving (conflict resolution). Third, more health educators need to become involved in research on this topic. Clarification is needed on such issues as the roles of alcohol, drugs, racism, family violence, and the modeling of firearm use on the temptations to own and use guns.

Health educators must become more aware of the

Table 4 Adolescents' Perceptions of the Consequences of Guns by Gender

	% Agree*		% Disagree		% Not Sure	
Item	Male	Female	Male	Female	Male	Female
I believe that if there were fewer guns there would be less crime.	40	49	38	35	22	16
If pistols were banned from sale there would be fewer people shot by criminals.	48	44	31	25	21	31
Having a gun at home will help protect you and your family from criminals.	69	62	14	21	17	17
A handgun purchased for self- defense is more likely to be used on another family member than on a criminal.	34	39	33	26	34	35
Having a gun around the house makes me feel safe.	61	39	18	35	21	26**
If you have a gun people will not bother you.	35	19	40	58	25	23**
Americans are more likely to be shot and killed than are people in any other major country in the world.	34	30	30	26	36	44
Most people who are shot and killed are killed as the result of arguments and fights.	74	82	9	5	17	13
Most people are shot by people they do not know.	47	42	27	31	27	27
Guns are the leading method of suicide for teen-agers.	27	32	32	34	41	34
Women are more likely to be shot and killed than men.	12	11	51	59	37	30
Wives who are abused by their husbands are much more likely to be shot and killed than are wives who are not abused.	38	48	18	17	43	35
Husbands of poor families are more likely to shoot and kill their wives than the husbands of families with more money.	23	16	36	47	41	37
People who live in poverty are more likely to be shot and killed than are people with more money.	30	23	39	41	31	36
Most African-Americans who are shot and killed are shot by other African-Americans.	58	57	14	16	28	27
Most whites who are shot and killed are shot by other whites.	27	21	28	30	45	49
Most African-American males who are shot and killed are killed by police officers.	26	25	33	36	41	39
African-American males are more likely to be shot and killed than any other group of people.	51	50	28	25	21	25

On a five-point scale, Agree = 5 or 4; Not Sure = 3; Disagree = 2 or 1.

N = 377 African-Americans, 202 whites

factors that are likely to be important contributors to violence and homicide; being male, having immediate access to guns, substance abuse (especially alcohol), racial discrimination, poverty, and a cultural acceptance of violent behavior. Urban African-American adolescents are over-represented among the poor and as victims of fatal and nonfatal violence. Thus, health educators need to help design violence prevention programs for high-risk adolescents that interweave the issues of adolescent development with racism and poverty.

One developmental characteristic of adolescence is narcissism, an extreme state of self-consciousness which makes the adolescent vulnerable to embarrassment. A second adolescent characteristic, for males, is a stage of sexual identity known as "machoism." Unfortunately, macho adolescents interpret this as meaning one must be aggressive, even to the point of sometimes being violent. A third developmental perspective of adolescence is identification with peers and the subsequent inordinate influence of peer pressure. Thus, adolescents often grow up in an urban culture that accepts and even condones violence, the kind of environment that when combined with the aforementioned adolescent developmental characteristics is likely to result in situations in which adolescent males are unable to disregard a verbal attack or some other perceived affront to their masculinity.

Urban African-American adolescents are likely to encounter racism. Such contact with racism, combined with inadequate job opportunities, is likely to create a condition which Lewis¹⁶ termed "free floating anger," anger not generated by a specific event but has developed as the result of some global factor(s) such as racism and unemployment. This more global anger could be considered the "excess baggage" an urban adolescent is likely to bring to an encounter that lowers the youth's threshold for engaging in violent behaviors. Thus, violence prevention and education about guns must be based on establishing a healthy response to anger.

The health education curriculum should provide information about developmental characteristics that make adolescents at high risk of being involved in confrontations, present statistical information on guns, violence, and homicide (dispel gun-related myths), create a repertoire of alternatives to fighting when caught in a potentially explosive situation, allow students to role play situations (and possibly videotape them) that could lead to an altercation and analyze escalating behaviors that may lead to a violent outcome, and finally, help create a school environment where differences of opinion can be expressed in a nonthreatening, weaponfree setting.¹⁷ Such educational interventions need to be

carefully designed and rigorously evaluated so successful programs can be replicated in other schools.

CONCLUSION

Study limitations need to be noted. First, the sample was one of convenience, so results may not be generalizable to other groups of adolescents. However, the study does describe the perceptions of these particular students concerning guns, and provides health educators with preliminary information concerning this serious and prevalent health problem facing today's youth. Second, the monothematic nature of the questionnaire may have caused a response set bias in the students. Further research is needed to examine the perceptions of adolescents regarding firearms using a national representative sample.

References

- 1. Fingerhut LA, Kleinman JC. International and interstate comparisons of homicide among young males. *JAMA*. 1990;263:3292-3295.
- 2. Fingerhut LA, Kleinman JC. Firearm mortality among children and youth. In: *Vital and Health Statistics*, no 178. Hyattsville, Md: National Center for Health Statistics; 1989.
- 3. Christoffel KK. American as apple pie: Guns in the lives of US children and youth. *Pediatrician*. 1983-85;12:46-51.
- 4. Fingerhut LA, Kleinman JC. Mortality among children and youth. Am J Public Health. 1989;79:899-901.
- 5. Griffith EEH, Bell CC. Recent trends in suicide and homicide among blacks. JAMA. 1989;262:2265-2269.
 - 6. Cassidy JW. The case for firearms. Time. 1990;135(5):22.
- 7. Baker SP, Without guns, do people kill people? Am J Public Health. 1985;75:587-588.
- 8. Spivak H, Prothrow-Stith D, Hausman AJ. Dying is no accident: Adolescents, violence, and intentional injury. *Pediatr Clin North Am.* 1988;35:1339-1347.
- 9. American Medical Association, Council on Scientific Affairs. Firearm injuries and deaths. A critical public health issue. *Public Health Rep.* 1989;104:111-120.
- 10. Rose HM. Black Homicide and the Urban Environment. Washington, DC: National Institute of Mental Health; 1981.
- 11. Mauser GA. A comparison of Canadian and American attitudes towards firearms. Can J Criminology. 1990;32:573-589.
- 12. Baker SP, O'Neill B, Karpf R. The Injury Fact Book. Lexington, Mass: Lexington Books; 1984:129-137.
- 13. Sadowski LS, Cairns RB, Earp JA. Firearm ownership among nonurban adolescents. Am J Dis Child. 1989;143:1410-1413.
- 14. Smith D. Caught in the Crossfire: A Report on Gun Violence in Our Nation's Schools. Washington, DC: Center to Prevent Handgun Violence; 1990.
- 15. Schubiner H, Scott R, Tzelepis A, Podany E, Konduri K. Exposure to violence among inner-city youth. *J Adolesc Health Care*. 1990;11:376.
- 16. Akbar N. Homicide among black males: Causal factors. Public Health Rep. 1980;95:549.
- 17. Prothrow-Stith D. Interdisciplinary interventions applicable to prevention of interpersonal violence and homicide in black youth. In: Surgeon General's Workshop on Violence and Public Health. Washington, DC: US Government Printing Office; 1986:35-43, Public Health Service publication no HRS-D-MC86-1.

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