

# Factors Associated with the Use of Violence among Urban Black Adolescents

## ABSTRACT

*Objectives.* The purpose of this study was to examine social and psychological factors associated with the use and nonuse of violence among Black adolescents living in a community with a high level of violent crime.

*Methods.* Adolescents ( $n = 225$ , 44% male) 11 to 19 years of age living in or around nine housing projects in an urban area were administered an anonymous questionnaire.

*Results.* Self-reported use of violence was associated with exposure to violence and personal victimization, hopelessness, depression, family conflict, previous corporal punishment, purpose in life, self-assessment of the probability of being alive at age 25, and age and was higher among males.

*Conclusions.* These data support the hypothesis that exposure to violence is associated with adolescents' self-reported use of violence. However, adolescents with a higher sense of purpose in life and less depression were better able to withstand the influence of exposure to violence in the home and in the community. (*Am J Public Health*. 1994;84:612-617)

Robert H. DuRant, PhD, Chris Cadenhead, BA, Robert A. Pendergrast, MD, MPH, Greg Slavens, BBA, and Charles W. Linder, MD

## Introduction

Violence among America's youth has emerged as a significant public health problem<sup>1-7</sup> for which no effective prevention method has been found,<sup>2</sup> and the problem disproportionately involves minority youth.<sup>4</sup> Homicide is the leading cause of death among young Black men 15 to 19 years of age and occurs at a rate nine times that for young White men of the same age.<sup>8</sup> The homicide rate for young Black women has also been found to be 3.5 times higher than that for young White women from the same age group.<sup>3</sup> The National Crime Survey Report estimated that, in 1989, 1.2 million youth 12 to 19 years of age were victims of single-offender crimes and 646 750 were victims of multiple-offender crimes, including robbery, simple assault, aggravated assault, and rape.<sup>9,10</sup> Adolescent violence is a multifaceted problem, and research on its causes is needed to provide requisite data for the development of prevention and intervention programs.

Violence is not a uniquely racial problem,<sup>9-11</sup> and its excess mortality by race is almost entirely accounted for by social factors associated with poverty and unemployment.<sup>2,12-14</sup> Within this social environment, cultural transmission theory proposes that crime and delinquency are learned in interaction with other people, largely within intimate primary groups such as families, peer groups, or gangs.<sup>15</sup> There is extensive evidence that many children and adolescents are continuously exposed to high levels of violence throughout their lives and that this socialization may have a significant effect on the increase in violent behavior observed over the last 40 years.<sup>16</sup> This includes witnessing

violence on television and in movies, in the community, and in the home<sup>2,17-21</sup>; the proliferation of gun ownership by adolescents<sup>22-24</sup>; and being a victim of violence, severe corporal punishment, and early physical abuse.<sup>25-40</sup> However, not all adolescents who live in communities with high levels of poverty and unemployment and who are exposed to or are victims of violence engage in violent behavior. Many of these young people demonstrate unexpected resilience in the face of such social insults. Identification of resiliency factors will help in the development of effective prevention programs for urban adolescents who are exposed to social conditions that place them at risk of engaging in violent behavior. The purpose of this study was to examine the relationships between self-reported exposure to or victimization by violence and the use of violence among Black adolescents living in communities characterized by high levels of poverty, unemployment, and violence. Social and psychological factors associated with resiliency among these youth were also examined.

Robert H. DuRant is with the Division of Adolescent/Young Adult Medicine, Children's Hospital, Harvard Medical School, Boston, Mass. Greg Slavens and Charles W. Linder are with the Section of General Pediatrics and Adolescent Medicine, Medical College of Georgia, Augusta. Chris Cadenhead is with the Department of Psychology, Furman University, Greenville, SC. Robert A. Pendergrast is with the Division of Adolescent Medicine, Johns Hopkins University School of Medicine, Baltimore, Md.

Requests for reprints should be sent to Robert H. DuRant, PhD, Division of Adolescent/Young Adult Medicine, Children's Hospital, Harvard Medical School, 300 Longwood Ave, Boston, MA 02115.

This paper was accepted November 10, 1993.

## Methods

### Subjects

The study was conducted on 225 Black adolescents living in or around nine US Department of Housing and Urban Development housing projects in Augusta, Ga. The subjects ranged in age from 11 to 19 years. A description of the subjects is provided in Tables 1 and 2.

### Procedures

The study protocol was approved by the Human Assurance Committee of the Medical College of Georgia. Eight adolescents living in the targeted housing projects were identified by community health workers and enlisted to recruit subjects. The recruiters were asked to contact as many adolescents in their project area as was possible by delivering a parental and youth informed consent form along with information as to when and where the questionnaires were to be administered. The recruiters were paid \$1 for each subject who completed a questionnaire. Nonresponse data for those potential subjects who were asked to participate but refused were not collected by the recruiters. To reduce the sampling bias, adolescents living in these housing projects who would not have had the opportunity to attend the scheduled survey sessions because they were participating in summer school ( $n = 23$ ) or in a housing authority summer enrichment program ( $n = 40$ ) were invited to participate. More than 90% of eligible subjects ( $n = 63$ ) in these programs participated in the survey. These three groups of subjects, as well as the recruiters, did not differ on any demographic variable or in self-reported violent behavior. Questionnaires were administered in the housing project community centers, a local school during a summer enrichment program, and an area high school holding summer school. In addition, the questionnaire was administered to a small number of subjects in the conference room of Georgia's Children and Youth Project, which provides health care to children and adolescents living in Department of Housing and Urban Development housing projects. Written parental and subject informed consent was obtained, and the subject's name was not placed on the questionnaire.

To control for variations in reading ability, the questionnaire was read aloud by trained interviewers to groups of subjects ranging in size from 3 to 40; the

**TABLE 1—Means, Standard Deviations, and Test-Retest Reliabilities for Demographic Variables**

	Mean	SD	Test-Retest Reliability
Age, y	14.4	2.2	1.00
School grade	7.1	2.4	.96
Total number of people in home	5.0	1.9	.98
Head of household's education level	12.5	2.5	.84
Head of household's socioeconomic status	5.8	1.4	.86

**TABLE 2—Frequency Distributions of Demographic Variables**

	Subjects		Test-Retest Reliability
	No.	%	
Gender			
Male	99	44.0	1.00
Female	126	56.0	
Marital status			
Never married	208	92.4	1.00
Not married but living with partner	16	7.1	
Married	1	0.4	
Employed			
Yes	61	27.4	.84
No	162	72.6	
Religious affiliation			
Yes	156	70.3	.82
No	66	29.7	
Live with parent(s) or relative(s)			
Yes	211	96.3	1.00
No	8	3.7	
Birth order			
Oldest	75	33.3	.89
Youngest	37	16.4	
Middle	100	44.4	
No siblings	13	5.8	
Head of household			
Father, stepfather, grandfather	27	12.0	1.00
Mother, stepmother, grandmother, aunt	191	84.9	
Live on own	3	1.3	
No answer or don't know	4	1.8	

instrument required between 45 and 60 minutes to administer, depending on the size of the group and the number of questions asked by the subjects. In no cases were subjects' parents present when the questionnaire was administered. Subjects were paid \$5 for completing the questionnaire.

### Questionnaire

The questionnaire was constructed from several standardized measures described in the following paragraphs. These instruments were chosen because they have been used extensively among minority youths. In order to assess the

stability of the subjects' responses over time, 12 subjects representing each of the survey administration sites were administered the same questionnaire 1 week later. These subjects were given \$10 for the retest of the questionnaire. One-week test-retest reliability coefficients were computed on these subjects. For the total sample ( $n = 225$ ), each constructed scale underwent item analysis and was tested for reliability (internal consistency) with Cronbach's alpha.

Adolescents' use of violence was measured with selected items from the Denver Youth Study Self-Reported Delinquency Questionnaire<sup>41</sup> and items

from the Centers for Disease Control and Prevention's Youth Risk Behavior Survey. Items from these two instruments were combined to create an eight-item scale that was tested for reliability. On the basis of item analysis, seven of the eight items were found to have high internal consistency. These included questions measuring the carrying and use of weapons, fighting and assaults, and involvement in gang fights (see Table 3). The use of violence scale, which ranged from zero to seven, had a Cronbach's alpha of .68 and a 1-week test-retest reliability coefficient of .86 (see Table 4).

Exposure to and victimization by violence in the community were assessed with questions from Richters and Martinez's Survey of Exposure to Community Violence.<sup>33</sup> This survey measures the frequency of exposure to or being a victim of 27 types of violence such as gang violence, selling drugs, burglary, police arrests, assaults, physical threats, sexual assaults, weapon carrying, firearm use, and intentional injuries such as stabbings, shootings, suicides, and murders. On the basis of item analyses, questions measuring exposure to violence had high internal consistency with questions assessing victimization by crime and violence. When separate scales were constructed for being exposed to violence and victimization, the alphas were smaller than for the full scale of 27 items. This 27-item self-report scale, which ranged from 0 (low exposure or victimization) to 116 (high exposure to violence), had a Cronbach's alpha of .85 and a test-retest reliability coefficient of .90.

Exposure to domestic conflict and violence was assessed through a modified version of the Conflict Tactics Scale.<sup>42</sup> This 20-item scale has good concurrent validity when correlated with other measures of parental psychosocial distress.<sup>43</sup> In the present study, 1 item was found to have poor internal consistency with the other 19 items and was discarded. The revised scale ranged from 19 (indicating low domestic conflict) to 71 (representing high conflict). The scale had a Cronbach's alpha of .86 and a test-retest reliability of .97.

The Home Environment Interview, Version II, was used to assess disciplinary activity in the home.<sup>32</sup> This 6-item scale was modified slightly to measure current rather than retrospective patterns of corporal punishment. The scale ranged from 0 to 6 (high disciplinary activity) and had a Cronbach's alpha of

.58. However, the test-retest reliability was only .24.

The Children's Depression Inventory was used to measure a variety of symptoms of depression.<sup>44</sup> This 27-item self-report measure has been found to have good reliability and to correlate well with other similar psychological scales. The instrument has a potential range of 0 to 54, with 54 suggesting the maximum level of depression. In this sample, the scale ranged from 0 to 31 and had a Cronbach's alpha of .82 and a test-retest reliability of .84.

The Hopelessness Scale for Children was used to measure subjects' negative expectations about the future.<sup>45</sup> This 16-item scale, which ranges from 0 (indicating low hopelessness) to 12 (indicating a high level of hopelessness), had a Cronbach's alpha of .64 and a test-retest reliability coefficient of .61.

The Purpose in Life test was designed to measure the level of perceived meaning in one's life.<sup>46,47</sup> It has been found to measure a construct distinctly different from locus of control.<sup>48</sup> Each of the 14 items was scored on a 7-point scale so that the minimum ("worst") score was 14 and the maximum was 98. The subjects' scores ranged from 35 to 98, and the scale had a Cronbach's alpha of .86 and a test-retest reliability coefficient of .61.

A 5-point scale was created to determine subjects' certainty of being alive at age 25. The choices ranged from "I am absolutely sure that I will live to be 25 years of age" (scored as 1) to "I am absolutely sure that I won't live to be 25 years of age" (scored as 5). This scale had a test-retest reliability of 1.0.

Subjects' religious activity was assessed with two items. First, the subject was asked whether he or she was a member of any church or religious organization. Second, a 5-point scale was used to determine frequency of church attendance or religious activity. Test-retest reliability was .82 for the former and .60 for the latter.

Four questions were asked to assess family structure. These questions involved the total number of people in the home, whether the subject lived with a parent or adult relative, the subject's birth order, and the identification of the head of the subject's household. All of the questions had a test-retest reliability of .89 or better.

Future aspirations were assessed with two questions. Subjects were asked, "If you could do whatever you wanted,

what type of job or profession do you want to have when you grow up?" The answers were scored on a 7-point ordinal scale based on the educational level needed to achieve the professional goal (with 1 being the highest educational level). At a separate point in the questionnaire, the subjects were asked what kind of job they saw themselves doing when they were 25 years of age. This question was scored in the same manner as the preceding question. The test-retest correlation for these questions was .91.

Parents' socioeconomic status was based on the expected educational level needed to qualify the parents for their current job or profession. This was scored on a 7-point ordinal scale, with 1 indicating the highest socioeconomic status level (professional job requiring a doctoral degree), 6 indicating employment not requiring a high school education, and 7 indicating unemployed status.

### Statistical Analysis

Interval and ordinal data are summarized as the mean  $\pm$  standard deviation. Bivariate analyses were conducted with Pearson product moment correlation coefficients, analysis of variance, and chi-square tests. Variables found to be significantly ( $P \leq .05$ ) associated with adolescents' use of violence were analyzed with stepwise multiple regression. Because of missing values on some variables, the regression analysis was conducted on the subjects with complete data ( $n = 209$ ).

### Results

Eighty-four percent of the adolescents reported engaging in at least one form of violent behavior. The percentages of male and female subjects engaging in each type of violence are reported in Table 3. The mean response on the violence scale was  $2.1 \pm 1.7$ , with a median score of 2.0 and a skewness of  $0.94 \pm 0.16$ . The exposure to violence and victimization scale was normally distributed, ranging from 0 (low) to 116 (high). The mean response of  $44.2 \pm 22.6$  suggests that the subjects in this study had been frequently exposed to and been victims of violence (Table 4).

Male subjects ( $2.1 \pm 1.8$ ) reported engaging in significantly ( $P \leq .01$ ) more violent behavior than female subjects ( $1.8 \pm 1.6$ ). Self-reported use of violence was positively correlated with previous exposure to violence and victimization;

levels of hopelessness, depression, and family conflict; previous corporal punishment; and age. Use of violence was negatively correlated with the purpose in life scale and expectancy of being alive at age 25 (Table 5). Use of violence was not significantly correlated with resiliency factors such as family structure, socioeconomic status, religious behavior, or any other demographic variable. However, a factor indirectly associated with resiliency, higher purpose in life score, was correlated with greater frequency of attendance at religious services ( $r = .20$ ,  $P \leq .004$ ) and a higher socioeconomic status of the head of household ( $r = -0.20$ ,  $P \leq .004$ ). Also, subjects who lived in households in which the head of household was employed had a significantly higher purpose in life score ( $P \leq .003$ ), had fewer feelings of hopelessness ( $P \leq .017$ ), and were more likely to believe they would be alive at age 25 ( $P \leq .016$ ) than adolescents from homes with unemployed heads of households.

When each of the variables found to be significantly associated with use of violence was analyzed with stepwise multiple regression, previous exposure to violence and victimization was the strongest predictor of use of violence, explaining 26.6% of its variation (Table 6). The depression scale was entered as the second variable in the regression model, explaining an additional 3.8% of the variation in use of violence. Gender explained an additional 1.6% of variation in use of violence as the last variable entered into the model. The interaction effects between gender and the other independent variables were not significant. These three variables accounted for 31.1% of the variation in the adolescents' use of violent behavior. Since the other variables significantly correlated with use of violence were also correlated with both exposure to violence and depression, they did not account for any additional variation in the regression model (Table 5). For example, depression was negatively correlated with purpose in life and positively correlated with corporal punishment, family conflict, and hopelessness (Table 5). Exposure to violence and victimization was positively correlated with age, family conflict, depression, and hopelessness and negatively correlated with purpose in life. These data suggest that factors associated with resiliency are not totally independent of the strongest predictor of adolescents' use of

TABLE 3—Items Included in the Use of Violence Scale

	Males		Females	
	No.	%	No.	%
Attacked someone they lived with out of anger	44	44.4	66	52.4
Involved in a physical fight in the last 12 months	64	64.6	70	55.5
In the previous 12 months, received an injury during a physical fight requiring medical care	12	12.1	9	7.1
Been involved in a gang fight	25	25.3	15	11.9
Carried a weapon such as a gun, knife, or club in the last 30 days	35	35.4	20	15.8
Ever carried a hidden weapon	41	41.4	31	24.6
Attacked someone with a weapon with the idea of seriously hurting or killing	19	19.2	17	13.5

TABLE 4—Means, Standard Deviations, and Reliability Coefficients for Social and Psychological Scales

	Mean	SD	Test-Retest Reliability	Cronbach's $\alpha$
Desired socioeconomic status	2.9	1.6	.91	...
Anticipated socioeconomic status at age 25	3.5	1.9	.91	...
Church attendance	3.5	1.5	.60	...
Corporal punishment	0.9	1.3	.24	.58
Conflict Tactics Scale (family conflict)	34.9	9.9	.97	.84
Exposure to and victim of violence	44.2	22.6	.90	.85
Children's Depression Inventory	7.8	6.0	.84	.82
Hopelessness Scale for Children	2.4	2.3	.61	.64
Purpose in Life test	81.2	12.9	.61	.86
Alive at age 25	3.8	0.9	1.00	...
Use of violence	2.1	1.7	.86	.68

violence: their exposure to violence in the past.

## Discussion

Koop and Lundberg have stated that the solutions to violence are very complex and that research on the causes, prevention, and cures of violence is needed.<sup>1</sup> In this study, we addressed factors associated with Black adolescents' self-reported use and nonuse of violence. As expected, self-reported use of violence by these Black adolescents was significantly correlated with three indicators of previous exposure to violence: self-reported exposure to violence and victimization in the community, degree of family conflict, and severity of corporal punishment and discipline. Because these data were collected in a cross-sectional survey, we cannot imply causation between multiple exposures to

violence and adolescents' reported use of violence. These relationships may be covariational in nature, with viewing violence in the community, personally experiencing violence and crime, witnessing violence and conflict among family members in the home, being a victim of severe corporal punishment, and actually using violence dynamically interacting with one another as these events co-occur. These data support the cultural transmission theory that has proposed that adolescents' use of violence is learned within intimate primary groups such as families, peer groups, and other sources for modeling such as gangs.<sup>15</sup> These data also support previous theoretical and empirical work suggesting that experiencing or being a victim of violence will increase the risk that an adolescent will, in turn, use violence against others.<sup>16-21,25-33</sup>

**TABLE 5—Pearson Correlation Coefficients (P Values) between Black Adolescents' Use of Violence and Social and Psychological Scales**

	Exposure to Violence	Age	Alive at Age 25	Purpose in Life	Corporal Punishment	Family Conflict	Depression	Hopelessness
Age	.22 (.001)	...	...	...	...	...	...	...
Alive at age 25	-.11 (NS)	.02 (NS)	...	...	...	...	...	...
Purpose in life	-.18 (.009)	-.04 (NS)	.15 (.031)	...	...	...	...	...
Corporal punishment	.12 (NS)	-.10 (NS)	-.10 (NS)	-.26 (.003)	...	...	...	...
Family conflict	.42 (.0001)	-.01 (NS)	-.07 (NS)	-.19 (.005)	.25 (.0001)	...	...	...
Depression	.28 (.0001)	.08 (NS)	-.14 (.005)	-.58 (.0001)	.32 (.0001)	.29 (.0001)	...	...
Hopelessness	.20 (.003)	-.05 (NS)	-.08 (NS)	-.51 (.0001)	.23 (.001)	.33 (.0001)	.55 (.0001)	...
Use of violence	.50 (.0001)	.17 (.01)	-.18 (.007)	-.26 (.0001)	.20 (.004)	.27 (.0001)	.32 (.0001)	.32 (.0001)

Note. NS = not significant.

**TABLE 6—Multiple Regression Analysis of Black Adolescents' Use of Violence**

	$\beta$	$R^2$ Change	F	P	r
Exposure to and victim of violence	.034	.266	74.99	.0001	.52
Depression	.062	.038	45.12	.0001	.32
Gender	-.443	.016	32.22	.0001	-.15
Constant	.822	...	...	...	...

Multiple R = .566;  $R^2 = .320$ ; Adjusted  $R^2 = .311$ .

Although the depression scale was significantly correlated with the level of violent behavior, we cannot assume that depressed adolescents are more likely to commit violent acts. Because these data were collected by means of a cross-sectional survey, it is also probable that exposure to high levels of violence and involvement in violent activity could result in higher levels of depression among youth. However, these data indicate a definite association between depression and self-reported use of violence independent of the influence of previous exposures to violence.

Although these adolescents were living in a community characterized by high levels of poverty, unemployment, and criminal activity, 15.6% reported that they had never used any form of violence, and an additional 31% reported only one form or type (not event) of previous violent activity. Several variables were found to be associated with resiliency that enabled adolescents to resist engaging in higher levels of violence despite the presence of multiple risk factors. In support of resiliency theory,<sup>34-39</sup> adolescents who reported lower levels of hopelessness, had higher scores on the purpose in life scale, and

believed there was a higher likelihood that they would be alive at age 25 were less likely to report engaging in violent behavior. Despite living in an environment that would be expected to facilitate feelings of hopelessness, little chance for successfully changing their life situations, and a chance that they may not live to be adults, many of these adolescents felt the opposite and correspondingly did not engage in violent behaviors. On the basis of research and theoretical work by Jessor,<sup>36</sup> Garmezky,<sup>37</sup> and Werner,<sup>35-39</sup> it would be expected that these relationships would be influenced by family structure, parental socioeconomic status, religious behavior, and parental employment status. None of these variables were associated with the use of violence by adolescents. This may be partly due to the small variation among categories for the family structure, parental socioeconomic status, and parental employment status variables. However, in support of resiliency theory, adolescents who attended religious services more often and whose head of household had a higher socioeconomic status were more likely to have higher purpose in life scores, which, in turn, were associated with less violent behav-

ior. Also, living in a home with an employed head of household was associated with higher purpose in life scores, fewer feelings of hopelessness, and a higher likelihood of believing one would be alive at age 25.

To apply these findings to prevention programs, comprehensive and multifaceted approaches are needed.<sup>4</sup> A lesson that has been learned from the acquired immunodeficiency syndrome epidemic is that cognitive approaches to prevention, such as informing the public about a disease and how to safeguard against infection, do not exert much influence on health-impairing habits among adolescents.<sup>49</sup> The most effective health education programs aimed at preventing and/or changing adolescents' health-impairing behaviors have used a social cognitive approach based on social learning theory.<sup>49,50</sup> This approach assumes that health-impairing behavior is socially learned, purposive, and functional and is the result of the interplay of social-environmental and personal factors. For adolescents to achieve self-directed behavior change, they need to be provided not only with the reasons to alter high-risk behavior but with the means, resources, and social supports to do so. We propose that skill-building violence prevention programs centered on conflict resolution and violence avoidance and aimed at younger adolescents be developed and evaluated and that these programs include strong normative components. However, prevention programs will have a limited impact on adolescent violent behavior if they are not accompanied by institution- and community-level changes in many of the risk factors for engaging in violent behavior (i.e., high levels of violence in the home, community, media, etc.).

For many adolescents coming of age in the 1990s, violence is a daily reality. They experience it in their homes and communities and witness the irresponsible portrayal of violence on prime time television and in movies. Among minority youth living in lower socioeconomic urban areas, the hopelessness of social immobility and a lack of modeling of nonviolent conflict resolution skills in their homes and communities provide scenarios in which there are neither incentives nor skills to avoid the use of violence. At the very least, solving the problem will require both national and personal commitments in initiating prevention programs during childhood and early adolescence. □

## References

- Koop CE, Lundberg GD. Violence in America: a public health emergency. *JAMA*. 1992;267:3076-3077.
- Roseberg ML, O'Carroll PW, Powell KE. Let's be clear: violence is a public health problem. *JAMA*. 1992;267:3071-3072.
- Mercy JA, Fenley MA. Forum on youth violence in minority communities: setting the agenda for prevention, summary of the proceedings. *Public Health Rep*. 1991; 106:225-279.
- Prothrow-Stith D, Weissman M. *Deadly Consequences*. New York, NY: Harper-Collins; 1991.
- Prothrow-Stith D, Spivak HR. Homicide and violence in youth. In: Wallace HM, Patrick K, Parcel AS, Igot JB, eds. *Principles and Practices of Student Health, Volume 1*. Oakland, Calif: Third Party; 1992:116-123.
- Mason J, Proctor R. Reducing youth violence—the physician's role. *JAMA*. 1992;267:3003.
- Novello AC, Shasky J, Froehle R. A medical response to violence. *JAMA*. 1992;267:3007.
- Guyer B. An epidemiological overview of violence among children. In: Schwarz DS, ed. *Report of the Twenty-third Ross Roundtable on Critical Approaches to Common Pediatric Problems*. Columbus, Ohio: Ross Laboratories; 1992:3-11.
- Fingerhut LA, Kleinman JC. International and interstate comparison of homicide among young males. *JAMA*. 1990;263: 3292-3295.
- Whitaker C, Bastian L. *Teenage Victims: A National Crime Survey Report*. Washington, DC: US Dept of Justice, Bureau of Justice Statistics; 1991. Publication NCJ-128129.
- Guyer B, Lescohier I, Gallagher SS, Hausman A, Azzara CV. Intentional injuries among children and adolescents in Massachusetts. *N Engl J Med*. 1989;321: 1584-1589.
- Homicide Surveillance: High Risk Racial and Ethnic Groups—Blacks and Hispanics, 1970-1983*. Atlanta, Ga: Centers for Disease Control; 1986.
- Runyan CW, Gerken EA. Epidemiology and prevention of adolescent injury, a review and research agenda. *JAMA*. 1989; 262:2273-2279.
- Smith DL, DuRant R, Carter TJ. Social integration, victimization and anomie. *Criminology*. 1978;16:395-402.
- Sutherland EH, Cressey DR. *Criminology*. 10th ed. Philadelphia, Pa: Lippincott; 1978.
- Centerwall BS. Children, television, and violence. In: Schwarz DS, ed. *Report of the Twenty-third Ross Roundtable on Critical Approaches to Common Pediatric Problems*. Columbus, Ohio: Ross Laboratories; 1992:87-94.
- Widom CS. Does violence beget violence? A critical review of the literature. *Psychol Bull*. 1989;106:3-28.
- Gladstein J, Sláter EJ. Inner city teenagers' exposure to violence: a prevalence study. *Md Med J*. 1988;37:951-954.
- Shakoor BH, Chalmers D. Co-victimization of African-American children who witness violence: effects on cognitive, emotional, and behavioral development. *J Nail Med Assoc*. 1991;83:233-238.
- Martinez P, Richters JE, Benoit M. The NIMH community violence project: II. Children's distress symptoms associated with violence exposure. *Psychiatry*. In press.
- Widom CS. The cycle of violence. *Science*. 1989;244:160-165.
- Fingerhut LA, Ingram DD, Feldman JJ. Firearm and nonfirearm homicide among persons 15 through 19 years of age: differences by level of urbanization, United States, 1979 through 1989. *JAMA*. 1992;267:3048-3053.
- Fingerhut LA, Ingram DD, Feldman JJ. Firearm homicide among Black teenage males in metropolitan counties. *JAMA*. 1992;267:3054-3058.
- Callahan CM, Rivara FP. Urban high school youth and handguns: a school based survey. *JAMA*. 1992;267:3038-3042.
- Simcha-Fagan O, Gersten JC. Early precursors and concurrent correlates of illicit drug use in adolescents. *J Drug Issues*. 1986;60:7-28.
- Bayatpour M, Wells RD, Holford S. Physical and sexual abuse as predictors of substance use and suicide among pregnant teenagers. *J Adolesc Health*. 1992;13: 128-132.
- Cavaiola AA, Schiff M. Behavioral sequelae of physical and/or sexual abuse in adolescents. *Child Abuse Negl*. 1988;12: 181-188.
- Riggs S, Alario AJ, McHorney C. Health risk behaviors and attempted suicide in adolescents who report prior maltreatment. *J Pediatr*. 1990;116:815-821.
- American Association for Protecting Children: Highlights of Official Child Abuse and Neglect Reporting 1986*. Denver, Colo: American Humane Association; 1987.
- Powers JL, Eckenrode J. The maltreatment of adolescents. *Child Abuse Negl*. 1988;12:189-199.
- Bishop V, Woodward K, D'Angelo L. Health risk behavior in urban youth. *J Adolesc Health*. 1992;13:65.
- Holmes SK, Robins LN. The role of parental disciplinary practices in the development of depression and alcoholism. *Psychiatry*. 1988;51:24-36.
- Richters JE, Martinez P. *Survey of Exposure to Community Violence, Self-Report Version*. Rockville, Md: National Institute of Mental Health; 1990.
- Rutter M. Psychosocial resilience and protective mechanisms. *Am J Orthopsychiatry*. 1987;57:316-331.
- Masters AS, Best KM, Garmezy N. Resilience and development: contributions from the study of children who overcame adversity. *Dev Psychopathology*. 1990;2:425-444.
- Jessor R. Risk behavior in adolescence: a psychosocial framework for understanding and action. *J Adolesc Health*. 1992;12: 597-605.
- Garmezy N. Resilience in children's adaptation to negative life events and stressed environments. *Pediatr Ann*. 1991; 20:459-466.
- Werner EE. High risk children in young adulthood: a longitudinal study from birth to 32 years. *Am J Orthopsychiatry*. 1989;52:72-81.
- Werner EE. The children of Kauai: resiliency and recovery in adolescence and adulthood. *J Adolesc Health*. 1992;13: 262-268.
- Kagan J. Etiologies of adolescents at risk. *J Adolesc Health*. 1992;12:591-596.
- Huizinga D, Esbensen FA, Weiher AW. Are there multiple paths to delinquency? *J Criminal Law Criminology*. 1991;82: 83-118.
- Straus MA. Measuring intrafamily conflict and violence: the conflict tactics (CT) scales. *J Marriage Fam*. 1979;41:75-88.
- Wissow LS, Wilson MEH, Roter D, Larson S, Berman H. Family violence and the evaluation of behavioral concerns in a pediatric primary care clinic. *Med Care*. 1992;30:MS150-MS165.
- Kovacs M. The children's depression inventory (CDI). *Psychopharmacol Bull*. 1985;21:995-998.
- Kazdin AE, Rodgers A, Colbus D. The hopelessness scale for children: psychometric characteristics and concurrent validity. *J Consult Clin Psychol*. 1986;54: 241-245.
- Crumbaugh JC, Maholick LT. An experimental study in existentialism: the psychometric approach to Frankl's neogenic neurosis. *J Clin Psychol*. 1964;20:200-207.
- Crumbaugh JC. The seeking of noetic goals test: a complementary scale to the purpose in life test. *J Clin Psychol*. 1977;33:900-907.
- Walters LH, Klein AE. A cross-validated investigation of the Crumbaugh purpose-in-life test. *Educ Psychol Meas*. 1980;40: 1065-1071.
- Bandura A. A social cognitive approach to the exercise of control over AIDS infection. In: DiClemente RJ, ed. *Adolescents and AIDS: A Generation in Jeopardy*. Newbury Park, Calif: Sage; 1992:89-116.
- Bandura A. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice Hall; 1986.