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ABSTRACT

As violence becomes one of society's greatest concerns, schools are faced with decisions on implementing violence prevention strategies. One such program was implemented into the health education curriculum for middle-level students in the seventh grade (n=130) in rural Mississippi. An adaptation of the Prothrow-Stith "Violence Prevention: Curriculum for Adolescents" (1987) was introduced as a primary intervention for students to become aware of the consequences of violence and strategies to dissuade violent behavior. The curriculum was presented in eight units: (1) violence in society; (2) homicide; (3) risk factors; (4) anger; (5) expressing anger; (6) fighting; (7) what leads up to a fight; and (8) alternatives to fighting. During the program, students were actively engaged in discussions. Invited speakers and panelists served as resources from the community. Students enjoyed the videotaped role playing and subsequent viewings. Using a test to measure knowledge about violence prevention, significant knowledge gains were shown by seventh grade students taking the violence prevention curriculum. Contains 12 references. (JE)

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**EFFECTS OF A VIOLENCE PREVENTION PROGRAM  
ON STUDENT UNDERSTANDING OF VIOLENCE**

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## EFFECTS OF A VIOLENCE PREVENTION PROGRAM ON STUDENT UNDERSTANDING OF VIOLENCE

As violence becomes one of society's greatest concerns, schools are faced with decisions on implementing violence prevention strategies. Principals overwhelmingly (96%) have indicated the need for a violence prevention program in their schools (Enger & Howerton, 1993). One such program was implemented into the health education curriculum for middle-level students in the seventh grade. An adaptation of the Prothrow-Stith Violence Prevention: Curriculum for Adolescents (1987) introduced as a primary intervention for students to become aware of the consequences of violence and strategies to dissuade violent behavior.

### Background

Much of the background on youth violence in society and intervention of violence prevention programs was reported earlier by Howerton, Enger and Johnson (1993). Violence has a particular impact on the youth of our nation. Between 1987-91, the number of teenagers arrested for murder in the United States increased 85%. In 1991, 10-17 year-olds accounted for 17% of all violent crime arrests. Teens are also the victims; 2200 murder victims in 1991 were under age 18. It is estimated that on an annual basis, approximately 1 million teens between the ages of 12 and 19 are raped, robbed, or assaulted, often by their peers. Between 1987 and 1991, juvenile arrests for weapons violations increased 62%. One of 5 weapons arrests in 1991 was a juvenile arrest. Blacks had triple the number of weapons arrests compared to whites (Kantrowitz, 1993).

Statistics from the National Crime Survey of the US Bureau of the Census indicate that nearly 3,000,000 incidents of crime and violence are reported in United States in grades K-12 annually, and these statistics likely underestimate the extent of the problem given that both children and parents are often reluctant to report such incidents (Stephens, 1991). According to the National Association of School Security Directors, each year there are approximately 9,000 rapes, 12,000 armed robberies, 270,000 burglaries, and 204,000 aggravated assaults in American schools. In addition there are approximately 70,000 serious physical assaults on teachers (Rich, 1992).

An increasing problem is the deadly nature of assaults, much of this problem being the increasing availability of weapons. According to the National Center for Health Statistics, each year people using guns kill 5,000 Americans under age 20. A recent Harris Poll of 10-19 year-olds, indicates that 59% of these young people indicated they could get a gun if they wanted one, 36% within one hour. Nearly 1 in 10 respondents said they had shot at someone, while 11% said they had been shot at. Over 1 in 3 said they knew someone who was killed or hurt by gunfire, and a comparable percentage think their lives are likely to be cut short because of the threat of guns (Scanlan, 1993). Not only can children get guns, they are getting them. According to a 1990 national school-based Risk Behavior Survey (Public Health Services, 1991), of over 11,000 students in grades 9-12, nearly 20% of these students reported carrying a weapon

at least once during the 30 days preceding the survey, males (31.5%) significantly more likely than females (8.1%), and Hispanics (41.1%) and blacks (39.4%) significantly more likely than whites (28.6%).

### **Violence Prevention Program Intervention**

As a result of increased awareness of the violent nature of our society, there is a growing recognition in this country of the need for violence prevention programs to reduce aggression and victimization, particularly among African-American youth (Hammond & Yung, 1991; Prothrow-Stith & Weissman, 1991). One logical approach to this problem is through education. For example, one of the major research findings relating to adolescent aggression relates to the differences in the way aggressive and nonaggressive youth think about violence. Aggressive youth are more apt to attribute hostility to others, search for fewer facts in trying to understand a situation, and have more difficulty envisioning alternative solutions, especially nonviolent ones (Steinberg, 1991).

A large number of violence prevention programs have recently been developed. The Educational Development Center reported a review of various programs designed to deal with violence prevention for young adolescents (Wilson-Brewer, Cohen, O'Donnell, & Goodman, 1991). Of the 51 programs surveyed, over 75% were deficient with respect to program evaluation, availability of current data, and/or the inclusion of control group comparisons. One of the few programs that did meet their criteria for inclusion was Prothrow-Stith's Violence Prevention: Curriculum for Adolescents (Prothrow-Stith, 1987).

The objective of this investigation was to examine the effects of a violence prevention program on student acquisition of knowledge about violence.

### **Methods**

#### Subjects

There were 130 seventh grade students participating in the study. These students lived in a rural community located in the Mississippi River delta. They were divided about equally on gender. About 35% of the students were African-Americans and 65% were white. About 58% of these seventh graders lived at home with both parents, 40% lived in a single-parent home, and 2% had other guardians. The family paid for the lunch of 58% of the students; 42% received a free or reduced-price subsidized lunch.

These students had an overall grade point average of 2.44 on the 4-point scale. The grade averages from high to low were: 2.82 in social studies, 2.49 in mathematics, 2.37 in science, and 2.13 in English. Their average complete battery score on the Stanford Achievement Tests was a normal curve equivalent (NCE) score of 48.5, about average nationwide. The average individual test scores from high to low were: 57.4 in science, 53.1 in language, 47.7 in social science, 47.4 in math, and 42.7 in reading.

## Design

A randomized two group pre-test/post-test design was used to examine the effects of a violence prevention program on the knowledge gained about violence. Six classes of seventh-grade health education students were randomly assigned to two groups. Three classes made up the experimental group (N = 64) and three classes the control group (N = 66). After both groups received the pre-test measure, the experimental group the violence prevention program for four weeks while the control group received instruction on another health topic. After the four weeks, both groups were administered the post-test. Instruction on violence prevention was staggered so the classes assigned to the control group also received the program but after the post-test.

## Treatment

The violence prevention program was based on an adaptation of the Prothrow-Stith Violence Prevention: Curriculum for Adolescents (1987). The school's health education teacher delivered the modified violence prevention program over a four week period. As can be seen in Table 1, the curriculum was presented in eight units: (1) violence in society; (2) homicide; (3) risk factors; (4) anger; (5) expressing anger; (6) fighting; (7) what leads up to a fight; and (8) alternatives to fighting.

## Measures

A 40-item knowledge test on violence was administered as pre-test and post-test measures. The test was constructed to match the 40 objectives written for the violence prevention program. Five test items were written to correspond to five objectives for each of the eight units in the program.

## **Results**

### Performance on the Pre-Test

As shown in Table 2, there was no significant difference between the experimental and control groups on the total violence prevention pre-test. Nor were any significant differences noted on six of the eight subtests. Significant differences were noted on Unit 6 and Unit 8 with the experimental group having a higher score than the control group on fighting and alternatives to fighting. Prior to instruction in violence prevention, students answered about 22 of the 40 questions correctly.

### Performance After Treatment

After receiving instruction in violence prevention, students answered about 30.5 questions correctly while the control group (those not receiving violence prevention instruction) again answered about 22 questions correctly. As shown on Table 2, the experimental group

significantly out-performed the control group on the 40-item posttest ( $t = 6.76$ ,  $p = .000$ ). This performance was consistent over each of the eight subtests: violence in society ( $t = 4.41$ ); homicide ( $t = 8.08$ ); risk factors ( $t = 3.87$ ); anger ( $t = 2.52$ ); expressing anger ( $t = 3.50$ ); fighting ( $t = 5.38$ ); what leads up to a fight ( $t = 5.70$ ); and alternatives to fighting ( $t = 4.99$ ).

Since significant differences had been noted on two pre-test subtests, analyses of covariances were run with the pre-test serving as the covariate. In the post-test analyses shown in Table 3, the experimental group out-performed the control group overall and on all eight subtests.

### Discussion

Using a test to measure knowledge about violence prevention, significant knowledge gains were shown by seventh grade students taking the violence prevention curriculum in a health education course. These gains were consistent over each of the violence prevention eight units.

Throughout the four weeks of the program, students were actively engaged in discussions about incidents in their neighborhood and school as they related to the topics being presented. The development of web charts sparked the interest of students in generating ideas relevant to the discussion. Also, listings of what's good and bad about fighting and banners depicting the objectives of the program were popular with the students. Invited speakers and panelists served as valuable resources in the community for addressing the concerns raised in the curriculum and issues raised by the students. Videotaped role playing and subsequent viewings were popular with the students and facilitated students' recognition of acts leading to violence and methods to diffuse violent situations.

Presently, the curriculum is being revised and re-administered with other seventh grade health education students. New tests are being developed to measure student knowledge about violence prevention. Future study will relate various student characteristics, such as disciplinary incidents and academic achievement, to students knowledge and interest about violence prevention.

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Table 1

**VIOLENCE PREVENTION CURRICULUM**

<u>Unit</u>	<u>Topic</u>
1	There is a Lot of Violence in Society
2	Homicide Statistics and Characteristics
3	Exploring Risk Factors
4	Anger is Normal
5	There are Healthy and Unhealthy Ways to Express Anger
6	There is More to Lose than to Gain from Fighting
7	What Happens Leading Up to a Fight
8	Alternatives to Fighting; Practice Throwing a Curve

Adaptation from Prothrow-Stith (1987) Violence Prevention: Curriculum for Adolescents



Table 2

## Violence Prevention Pre-test and Post-test Results

Test		Experimental			Control			t-stat	t-prob	
		Mean	s	N	Mean	s	N			
Unit 1	Pre	3.48	1.02	54	3.48	1.14	56	0.00	.997	
	Post	4.51	.90	55	3.66	1.17	62	4.41	.000	*
Unit 2	Pre	2.28	0.83	54	2.39	0.87	56	-0.71	.479	
	Post	3.65	1.17	55	1.97	1.07	62	8.08	.000	*
Unit 3	Pre	2.74	.99	54	2.73	0.90	56	0.05	.962	
	Post	3.44	1.20	55	2.61	1.09	62	3.87	.000	*
Unit 4	Pre	3.06	1.22	54	2.82	1.34	56	.96	.339	
	Post	3.33	1.42	55	2.63	1.58	62	2.52	.013	*
Unit 5	Pre	3.48	1.31	54	3.11	1.23	56	1.54	.126	
	Post	4.11	1.13	55	3.29	1.40	62	3.50	.001	*
Unit 6	Pre	2.85	1.47	54	2.30	1.32	56	2.05	.042	*
	Post	3.98	1.30	55	2.58	1.52	62	5.38	.000	*
Unit 7	Pre	1.87	1.28	54	1.88	1.47	56	-0.02	.936	
	Post	3.36	1.22	55	2.06	1.24	62	5.70	.000	*
Unit 8	Pre	3.17	1.30	54	2.55	1.44	56	2.35	.021	*
	Post	4.16	1.10	55	2.97	1.48	62	4.99	.000	*
TOTAL	Pre	22.93	5.59	54	21.27	5.83	56	1.52	.131	
	Post	30.55	6.88	55	21.77	7.14	62	6.76	.000	*

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\* p < .05

Table 3

**Violence Prevention Experimental Versus Control Group  
Post-test Analysis with Pre-test Covariate**

<u>Test</u>	<u>Pre-test Covariate</u>			<u>Exp vs Cntl Group Effect</u>		
	<u>F-stat</u>	<u>F-prob</u>		<u>F-stat</u>	<u>F-prob</u>	
Unit 1 Subtest (5 pt)	14.53	.000	*	18.11	.000	*
Unit 2 Subtest (5 pt)	6.31	.013	*	64.84	.000	*
Unit 3 Subtest (5 pt)	11.43	.001	*	17.21	.000	*
Unit 4 Subtest (5 pt)	70.82	.000	*	4.87	.029	*
Unit 5 Subtest (5 pt)	27.33	.000	*	9.88	.002	*
Unit 6 Subtest (5 pt)	86.03	.000	*	20.80	.000	*
Unit 7 Subtest (5 pt)	43.49	.000	*	38.27	.000	*
Unit 8 Subtest (5 pt)	37.26	.000	*	18.95	.000	*
Total Test (40 pt)	188.84	.000	*	65.17	.000	*

\* p < .05