

VIOLENCE PREVENTION IN EARLY CHILDHOOD: EFFECTIVENESS OF A VIOLENCE PREVENTION CURRICULUM FOR HEAD START TEACHERS

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ABSTRACT

Youth in the U.S. are victims of, perpetrators of, and exposed to violence. A tool of violence prevention is early childhood education. Teachers of Head Start in rural, heavily Hispanic, South Texas are recruited to receive a newly developed violence prevention training program. This was done utilizing a quasi-experimental design with a control group and two experimental groups. Of the 107 teachers involved in the program, 84 completed both the pre-test and post-test instruments. The effectiveness of the training in influencing knowledge and attitudes is tested here. Analysis of the data indicates that knowledge and attitudes are influenced both by the training and by having had prior exposure to violence. The results of this study suggest that violence prevention education enhances both knowledge and feelings of competency regarding ability to deal with violence. This study indicates that there is a need for further development and implementation of violence prevention curricula for both teachers and children involved in early childhood training programs such as Head Start.

INTRODUCTION

Young people in the United States are victims of violence. According to a report from the Centers for Disease Control (1996) there are an average of 22 youth homicide victims per day in the United States. In fact, according to the World Health Organization (1995), the homicide rate for males in the United States, 15-24 years old, is 10 times that of Canada, 15 times that of Australia, and 28 times that of France and Germany.

Young people in the United States are perpetrators of violence. According to Snyder, Sickmund, and Poe-Yamagata (1996) nearly 20 percent of all violent crimes in 1994 involved a person under the age of 18. Fox (1996) found that homicide arrest rates for youth 14-17 years of age increased between 1989 and 1994 while decreasing for adults over 25.

Young people in the United States are exposed to violence and are affected by that exposure. According to Garbarino (1995)

In our interviews with families living in public housing projects in Chicago, we learned that virtually all of the children had first-hand experiences with shootings by the time they were five years old.

Powell, Dahlberg, Friday, Mercy, Thornton, and Crawford (1996) contend that "...violence by and to youths is an important public health problem."

Both witnessing violence and being a victim

of violence are precursors to violent behavior (Pynoos 1993; Terr 1991). Children exposed to chronic and severe physical punishment by parents are at increased risk of developing aggressive and violent behavior both in childhood and adulthood. Moreover, this behavior is likely to be manifested both in and outside the family (American Psychological Association 1993). In their review of the literature, Lewis, Mallouh and Webb (1989) found that approximately 20 percent of abused children go on to become delinquent compared with 5 percent of their non-abused counterparts. Children who witness violence rather than experiencing it directly are also at risk of becoming perpetrators of violence. In their study, DuRant, Cadenhead, Pendergrast, Slavens and Linder (1994) found that previous exposure to violence and victimization was the strongest predictor of use of violence by African-American adolescents living in a southern U.S. city. Several studies have shown that marital conflict is a greater risk factor than family instability for the development of conduct problems and delinquency in children (Grych, Fincham, 1990; Hetherington, Cox, Cox 1982; Loeber, Stouthamer-Loeber 1986).

Dysfunctional behavior, violence, can be approached in reactive ways - treatment, punishment, rehabilitation, or in a proactive fashion - through prevention. Gullotta (1994) provides a useful perspective which can be applied to violence prevention:

Primary prevention can be defined as planned

efforts to reduce (prevent) the incidence of new cases of dysfunctional behavior in a population not yet demonstrating signs of dysfunctional behavior and to encourage (promote) behaviors that are known to contribute to functional behaviors.

This indicates that a good maxim for prevention is 'the earlier the better'. A study by Dawkins, Fullilove, and Dawkins (1995)

...provided evidence based on mothers' observations of their children's behavior to support the assumption that potential child behavior disorders may be identified as early as age three or four.

Gullotta (1994) points out

The tools that preventionists use are education, competency promotion, community organization/systems intervention, and natural caregiving to encourage the growth of functional behaviors in society.

The American Psychological Association (1993) suggests that early childhood is the time to begin.

Laying the groundwork for preventing violence begins early in a child's development. In their early years, children learn fundamental ways of dealing with social conflict. Everyone who comes into contact with the child - parents, educators, childcare providers, healthcare providers - has the potential to contribute to a child's attitudes towards violence, and propensity toward violent behavior. Similarly, every institution that touches children's family, schools, mass media, community and religious organizations - can contribute positively to children's sense of safety and to their preference for alternatives to violence.

Yoshikawa (1994) contends that early childhood intervention is important in preventing delinquency.

Violence is learned. According to Powell et al (1996)

Social Learning Theory assumes that aggression and violence are learned behaviors. Much of the learning takes place by observing and modeling the behavior of others. Providing alternative behavioral models and new

knowledge can provide individuals with the justification for using them.

A lot of the violence is learned by exposure to violence (Garbarino, Dubrow, Kostelny, Pardo 1992). Ososfsky (1995) contends that

Education regarding the negative effects of violence exposure on children and how to help children after exposure has occurred should be part of professional preparation for all individuals coming into contact with children, including those working in day care centers, schools, law enforcement agencies, and parenting education groups.

Unfortunately, "...violence interferes with schooling but...Schools were not established nor teachers trained to teach violence prevention" (Powell et al 1996).

Teachers need training to understand and prevent violence (Ososfsky 1995).

It is more crucial than ever before, therefore, for teachers to understand the relationship between exposure to chronic cumulative risk and the resulting psychological, physical, and behavioral effects that may impinge on the mental health and academic success of disadvantaged children and, correspondingly, to develop more effective intervention strategies and skills to help these troubled children. (Garbarino et al 1992)

Programs have been developed to train children (and sometimes teachers) for grades K through 12 (Embry, Flannery, Vazsonyi 1996), grades two/three and five/six (Guerra 1994), and grade six (Wiist, Jackson, Jackson 1996). What is still needed according to Takanishi and DeLeon (1994) is work with teachers and children at an even earlier age:

Given the stressful conditions faced by many children and families eligible for Head Start, the critical need for preventive child and family support approaches in a comprehensive early childhood program is obvious.

A unique and perhaps groundbreaking violence prevention curriculum was developed and implemented by some of the authors in order to address these concerns. The program involved training teachers of and parents of children enrolled in Head Start. This article analyzes the data derived from the

teacher training program.

THE INTERVENTION PROGRAM

This study represents a quasi-experimental design in which participants (rural Head Start teachers) were non-randomly assigned to a control group and two intervention groups (Long intervention and Brief intervention). The project was conducted over a two-year period (1996-1997). Participant teachers were recruited from three rural Head Start Programs located in South Texas: The Texas Migrant Council (TMC) Head Start Program, The San Felipe Del Rio Consolidated Independent School District Head Start Program (SFDR), and the Education Service Center, Region 20 Head Start Program (ESC). The three programs encompass a vast geographical area of 11,497.9 square miles. The catchment areas of ESC, TMC, and SFDR are 4458.2, 6429.1, 3170.7 square miles respectively. During the study period, TMC Head Start served 356 children in 22 classrooms across five counties (Atascosa, La Salle, Bexar, Medina, and Frio), SFDR Head Start served approximately 360 children in 20 classrooms across Val Verde County, and ESC Head Start served 340 children in 19 classrooms across four counties (Atascosa, Kerr, Medina, and Banderita). Teachers were recruited to participate in the Violence Prevention study by their respective education coordinators. Each program required its teachers to participate in the training as part of ongoing faculty development. However, teachers who completed pre- and post-test measures did so on a voluntary basis. Because of the geographical distances and the difficulty in scheduling multiple training sessions, a non-random study design was implemented.

The training was conducted in two fashions: all at once in a long, all day session, and paced over time in two brief, half day sessions. Because the TMC program was able to supply a sufficient number of subjects, we were able to recruit both a control and intervention group from that site. Thus teachers from TMC were recruited to be in two of the three groups in this study (the control group and the brief version of the training). Teachers from SFDR and ESC were recruited to participate in the long version of the training.

In year one of the study, teachers in the control condition gave their written informed consent to participate prior to completing a pre-test knowledge and attitude instrument. They

completed the same instrument between one and two months later, depending on the county in which they were located. In the same year, ESC and SFDR teachers received the Long version of the Violence Prevention curriculum (six hours of training held over one day). Immediately prior to the commencement of the training session they gave their written informed consent, then completed the pre-test knowledge and attitude instrument. The participants completed the same instrument immediately after the conclusion of the training session. All training sessions were conducted by a combination of the authors who developed the curriculum (see below).

In year two of the study, teachers recruited from TMC received the Brief version of the Violence Prevention curriculum which consisted of two, three-hour training sessions held two months apart. They completed a pre-test at the beginning of the first three-hour training session which consisted of a standard set of attitude items and only the knowledge items that pertained to the content of the first training session. The knowledge items were readministered at the end of the session. At the beginning of the second training session, participants completed a pre-test consisting of knowledge items that pertained to the content of that session. At the completion of the second session, they completed a post-test consisting of the attitude items and the same knowledge items which were administered at the beginning of the second session.

THE TRAINING CURRICULUM

The content covered in the Brief and Long versions of the curriculum was identical. The curriculum was devised by four of the authors (NA, ET, JB, & FC) over a period of approximately two months. Working as a group, the team devised a list of goals, objectives, and activities for the curriculum based on an extensive literature review, teaching and clinical experience in the fields of early childhood education and violence prevention, input from the target population (Head Start Teachers), and cultural considerations. The major topics covered in the curriculum were as follows:

- , Definitions and meanings of violence
- , Epidemiology and statistics
- , Effects of violence over the lifespan
- , Early intervention as prevention:
 - a) creating a nonviolent atmosphere in early childhood settings

- b) emotional responses of young children to violence
- › Teaching young children to resolve conflict peacefully
- › Handling teacher-parent conflicts
- › Using positive discipline with children
- › Personal anger management
- › Commitment to change

The training employed an interactive, multi modal approach including the use of role-plays, visual aids, small group exercises, short video clips, problem-solving activities, and games. For example, in order to cover the topic of violence epidemiology and statistics, teachers engaged in a small group exercise known as "Violence Jeopardy." Teachers were divided into four teams with each team given a "participant handout" with four categories of "answers" (General Violence, Child Physical Abuse and Neglect, Child Sexual Abuse, and Domestic Violence). Within each category, there are six answers, each worth different points based on the purported degree of difficulty. The "host" (trainer) invites each team in turn to choose a category (e.g., Child Sexual Abuse) and one of the answers from a category. The team goal is to correctly identify the question that goes with the selected answer. Teams continue to take turns until all the categories have been exhausted. The team with the most points at the end of the game wins. All the participants are given fact sheets corresponding to the topics covered in each of the four categories at the end of the game.

Another example of the diversity of teaching strategies employed is illustrated by the use of a role-play exercise employed as part of the curriculum component addressing the use of positive discipline with children. Before addressing the effects of positive discipline, a role-play exercise is conducted to highlight the impact of inappropriate discipline. Teachers are divided into small groups of four and each takes on one of the following roles: parent, teacher, child, observer. The groups each role-play four scenarios, with members rotating roles for each scenario. Following a 5-minute role-play, the group uses a list of standard questions to guide their discussion. After the small group exercises are completed, the group reconvenes for a large group debriefing. Sample scenario: *The mother is picking up the child after a "bad behavior" day. The teacher begins to complain in great detail about each of the misbehaviors. The child is*

standing by his/her mother listening and watching.

RESEARCH QUESTIONS

The three questions of interest in this research are as follows:

- 1) Is this violence prevention training program effective in influencing knowledge regarding violence prevention and attitudes relevant to violence prevention?
- 2) Does the modality of training (brief or long) affect the effectiveness of the program?
- 3) Do other measured variables influence knowledge regarding violence prevention and attitudes relevant to violence prevention?

Characteristics of the Participants

The total violence prevention project included 211 participants (107 teachers, 90 parents, and 14 family service providers). This study focuses on those 84 teachers who completed both the pre-test and post-test instruments involved in this study. The demographic profile of this sample affords a unique opportunity to test the effects of a curriculum on a sample of teachers that include Hispanics and non-Hispanics who teach in rural environments.

This group of teachers is primarily female (94%), Hispanic (82%), married (66%), and has a child living in the household (69%). The average age is 33 (ranging from 22 to 65, with a median of 32.5). Ninety-four percent have completed some educational experience beyond the high school diploma (median years of education is 13 years). The median number of years working with Head Start is four years and the median number of years working in the education of children is close to six years.

There are three groups of teachers reported on here: the control group who underwent no training (N=23), the group of teachers who went through the training utilizing the "long" educational modality (N=34), and the group of teachers who went through the training utilizing the "brief" educational modality (N=27).

Scale Construction

In a desire for parsimony, scales are constructed. For items to form a scale they need to be related to one another. For the scale to be utilized in empirical research it ought to be tested (Carmines, Zeller 1979; Kim, Mueller

Table 1: Violence Prevention Knowledge

Type	Correct Answer	Question
General	False	Adults are mature enough to not be adversely affected by TV violence.
General	False	If the child has witnessed a violent situation, it is best not to upset the child by talking about it.
General	False	Violence is more of a problem to young children than to adolescents.
General	False	When trying to resolve a conflict between two people, a third person should never be involved.
General	False	When we talk about "outer influences," we mean the way the child acts that causes other children to be aggressive towards him/her.
General	False	Once you have brought up a child's negative behavior to the parent, it is best to not discuss it again.
General	True	Children may become destructive in order to identify with the perpetrator.
General	False	The way we handle anger is primarily inherited.
Specific	False	Touch is reassuring to children in times of crisis.
Specific	False	It is helpful to shift to new activities when there is a crisis.

1978; Spector 1992) to see if it is both valid (through factor analysis, when appropriate) and reliable (measured here by Cronbach's alpha). Finally, for comparisons to be made among groups on several scale scores, it is useful for those scores to be put on the same metric.

The scales utilized in this study were constructed based upon the responses to the instruments by all the teachers who completed the pre-test phase of the project (N=102). Respondents completed questionnaires which measure knowledge regarding violence prevention and attitudes relevant to violent prevention.

Violence Prevention Knowledge

Respondents in this study were presented with a series of 20 true/false statements measuring knowledge regarding violence (twelve were false and eight were true). These items were scored zero for incorrect and one for correct. Through reliability testing eight knowledge items formed a reliable scale (alpha = .56) which measures **general knowledge about violence** (see Table 1). Two other items which concern more **specific knowledge about violence** and appropriate responses in crisis situations were also asked. They make up a second scale for this study.

Attitudinal Scales

Respondents in this study were presented with statements measuring attitudes regarding their particular role as a teacher, violence

intervention, and violence prevention. They were asked their level of agreement with each item on a thermometer scale which has been scored from zero for strongly disagree to four for strongly agree. In order to avoid response set some of the items were worded in a "positive" fashion ("I have the skills and resources to ...") and some were worded in a "negative" fashion ("There is little I can do..."). For this analysis the scoring of the "negative" items has been reversed.

As a result of conducting principal components factor analysis with varimax rotation and reliability analysis four attitudinal measures are constructed: **Violence Prevention Competency** (two items; Cronbach's alpha = .67); **Violence Prevention Attributes** (four items; Cronbach's alpha = .73); **Role Efficacy** (single item indicator); and **Remediation Competency** (single item indicator) (see Table 2).

To make the scales easily comparable the scores on each item (ranging from zero to 4) in each scale are summed, divided by the maximum points possible (four for a single item indicator, 16 for a four-item indicator), and multiplied by 100. All scales range from zero (total absence of the attitude) to 100 (strongly agree with all positive items and strongly disagree with all negative items).

RESULTS

To test the hypotheses the following statistical tests were conducted: paired t-test, repeated measures, and multiple regression. Additional variables which are utilized in these

Table 2: Violence Prevention Attitudes

Violence Prevention Competency	I can structure my classroom in ways to help prevent and reduce conflicts between children. I have the skills and resources to be supportive of children even when I am under stress.
Violence Prevention Attributes	I believe that the skills and knowledge that children develop in my classroom will help them handle crises in elementary school. I am satisfied with the way I handle my anger. I have the skills to help children who have been the victims of violence. I am able to help resolve conflicts with the most difficult children.
Role Efficacy	I am confident of my ability to make a difference in the lives of the children in my class.
Remediation Competency	There is little I can do to help children overcome effects of living in a violent family. (reverse scoring)

Table 3: Pre- and Post-test Means on all Dependent Variables (scales range from zero to 100)

Indicator	Pre-Test	Post-Test
General Knowledge about violence	68.75	69.20
Specific Knowledge about violence	15.48	25.60
Violence Prevention Competency	83.84	84.82
Violence Prevention Attributes	68.68	76.04
Role Efficacy	85.42	87.20
Remediation Competency	56.02	68.07

tests will be explained if their meaning is not self-evident. The primary concern is whether or not involvement in the violence prevention training had an impact on knowledge or attitudes concerning violence; a secondary concern is whether or not the modality of training had an impact on knowledge or attitudes.

The results will be presented in the following order: comparison of mean scores before and after the training, paired t-test results, repeated measures results, results from multiple regression, a summary of all these results with a focus on the influence of modality of training.

The mean scores for all the teachers who completed both the pre-test and the post-test instruments are higher in the post-test (see Table 3).

The question is, of course, are any of these increases statistically significant? Examining the results of paired t-tests, the answer is yes. In the overall sample, the following scores are higher in the post-tests: specific knowledge ($t = 2.62, p = .01$), violence prevention attributes ($t = 3.66, p = .0005$), and remediation competency ($t = 2.64, p = .01$).

The results are very similar when only the experimental group (those who went through

the training) are examined. Average specific knowledge has gone from 18.03 to 26.23. This difference is not statistically significant at the .05 level ($t=1.69, p=.096$), however the tendency is in the positive direction. Remediation Competency has increased from 55.83 to 70.42 ($t = 2.54, p = .014$) as have scores on violence prevention attributes, going from 66.39 to 75.20 ($t = 3.73, p = .0005$). Going through this violence prevention training program has had a statistically significant impact on teachers' self-perceptions regarding their skills and abilities in dealing with violence.

Multivariate Analyses

Two multivariate statistical techniques were used to examine the data: the general linear model repeated measures procedure and ordinary linear least squares regression. Repeated measures provides analysis of variance when the same measurement is made several times on each subject. By specifying the between-subjects factor of what group the subject was in (control, long training, brief training) we are able to test null hypotheses about the effects of both the between-subjects factors and the within-subjects factors (pre- and post-test scores). Ordinary least squares

Table 4: Stepwise Regression on General Knowledge About Violence

Independent Variables	B	Beta	Significance
Long Training*	14.646	0.338	0.002
Impact of Violence	0.162	0.212	0.049
Constant	60.865		0.001
R-squared = .164			

*Dummy variable analysis: two dummy variables were used - long training (1=long training, 0=not long training); brief training (1=brief training, 0=not brief training). The control group serves as the baseline of 0.

Table 5: Stepwise Regression on Remediation Competence

Independent Variables	B	Beta	Significance
General Knowledge about Violence	0.44	0.313	0.002
Constant	36.257		0.005
R-squared = .098			

regression allows assessment of the direct and indirect influences on outcome variables.

A. Repeated Measures

To add to what is already known as a result of the paired t-tests, in the repeated measures analysis the interest was whether or not the null hypothesis could be rejected that there is no difference between pre- and post-test scores on the various measures and there were no between group differences, i.e., influence on the scores based on being in the long training, the brief training, or the control group. These tests were conducted for all six measures of interest: general knowledge, specific knowledge, violence prevention competency, violence prevention attributes, role efficacy, and remediation competency. Among these there was one with both statistically significant ($p < .05$) within group differences and between group differences: re-mediation competency. All three groups' post-scores were higher than their pre-scores; however, those who had the brief training had a much larger increase (+29) than those who were in the control group (+5) and those who had the long training (+4). Those who participated in the brief training improved more dramatically in their attitude that they could have an impact on children who live in violent families.

B. Multiple Regression

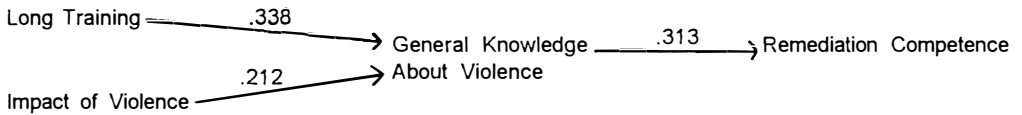
Multiple regression was performed on all of the outcome (post-test) variables to see if other variables in the study may have had an impact on knowledge and attitudes about violence. The other variables examined were years of education, years of experience

teaching children (years of experience in Head Start had to be eliminated because it was so highly correlated with this variable - multicollinearity problems), and impact of violence on respondent's life (measured by the respondent's response to "please rate how much impact violence has had on your life?" thermometer scale ranging from one "no impact" to five "extreme impact." This was recoded to go from zero to four, and then multiplied by 25 to place it on the same metric as the response variables).

Of the two knowledge scales, specific knowledge about violence was not influenced by any of these additional variables. However, general knowledge about violence is (see Table 4). Overall general knowledge about violence was increased primarily by two variables - having been in the long modality of violence prevention training, and violence having had a greater impact on the respondent's life.

With regard to the four attitudinal scales, since increase in knowledge might result in impacts on attitudes, in addition to education, experience with teaching children, and the impact of violence, post-test scores on general knowledge about violence and specific knowledge of violence were also included in the regression equations. Only one of the attitudinal scales was influenced by any of these additional variables: remediation competence (see Table 5). Only general knowledge about violence has an independent influence on final remediation competence score.

As a result of these two regressions (see Tables 4 and 5) we in effect have conducted a path analysis (Asher 1983) on remediation competence (see Figure 1). Participating in

Figure 1: Path Analysis of Influences on Remediation Competence

the long modality of violence prevention training and having been influenced by violence in one's life both have an indirect influence on remediation competence (mediated by their influence on general knowledge about violence) and increases in general knowledge about violence have a direct impact on raising levels of remediation competence.

Summary

In summary we have found that post-test scores in remediation competency and violence prevention attributes have improved over pre-test scores. This increase in remediation competency scores was of a greater magnitude for those who participated in the brief modality of the violence prevention curriculum. We have also found that general knowledge about violence post-test scores were increased by having participated in the long modality of the curriculum and by having had some previous experience with violence. Furthermore, higher final scores on the general knowledge indicator resulted in higher final scores on the remediation competency indicator.

DISCUSSION

Some answers to the three questions addressed by this study:

- 1) We have found that teachers who went through this program increased their specific knowledge regarding violence. We have also found that scores on remediation competency and violence prevention attributes have improved as a result of this training. Teachers who have gone through this program have the increased perception that they have the skills and abilities to have an impact on violence.
- 2) We have found that teachers participating in the brief training improved more dramatically in their attitude that they could have an impact on children who live in violent families. Those who participated in the longer training had a greater increase

in general knowledge about violence, which increased their feeling that they too could have an impact on children who live in violent families.

- 3) Years of education and years of experience teaching children have no influence on the outcome variables. However, having had previous experience with violence enhanced the likelihood that the program would increase general knowledge about violence.

These answers merit some discussion. The program is an effective one. It enhanced both knowledge and attitudes towards violence prevention. The training modality had some impact on the outcomes. It appears that the longer modality could be seen as more effective in so far as it increases general knowledge, and that increase increases remediation competency. Educational level and teaching experience do not have an impact on this program's effectiveness. However, previous experience with violence does. Garbarino et al (1992) point out that "... inner city teachers and child-care professionals often have feelings and ideas about community violence, or at least they confront the threat every day." It is most probably the case that people who have experienced violence will see the salience and practicality of education about violence.

Some may challenge the generalizability of these results because of the heavily Hispanic, rural nature of the teachers involved in this program. We have controlled for ethnicity and found that results hold for both Hispanics and non-Hispanics. What some may see as a weakness is actually a strength of this study. So many studies test urban, non-Hispanic samples. Here we are able to tell "the rest of the story."

CONCLUSIONS

Violence prevention education is necessary in the early years. Teachers of young children need to be educated as well regarding violence prevention. Violence prevention

education can enhance both knowledge and feelings of competency regarding dealing with violence. Further studies are needed with regard to the dynamics behind the differential effectiveness of brief versus long training. Also, additional studies are needed regarding the dynamics which lead those who have been exposed to violence to be more open to education regarding violence. As has been pointed out, 'the earlier the better'. It can only be hoped that this study will help encourage further development and implementation of violence prevention curricula for both teachers and children involved in early childhood training such as Head Start.

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