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Violence prevention: Reaching adolescents with the message

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Objective. **To identify an effective medium for communicating with adolescents in a large-scale, cost-effective violence prevention program.**

Methods. **A set of youth violence prevention programs was established at The Stamford Hospital, a level II trauma center. The traveling version of the program was presented to middle school students in four parts: 1) a rap music video created by our violence prevention staff, 2) a facilitated discussion about dealing with anger, 3) a video of a trauma resuscitation in our emergency department, and 4) a commercial video of a teenage boy paralyzed after a gunshot wound. A written questionnaire with a five-point rating scale (1 to 5) was used to survey the audience 1 month after the program. The survey assessed the respondents' recall of each part of the program and the perceptions of the value of each part in identifying the problem of violence and reducing violent behavior.**

Results. **Of 99 respondents, the highest ratings for retention, problem identification, and impact were given to the commercial video (combined average category ranking of 11.394) and the rap music video (11.182). The trauma resuscitation video and the discussion of anger were ranked as being less effective (10.253 and 9.383, respectively). The audience seemed to comprehend the main point of the program and ranked the program, as a whole, higher than any of the parts when measured by success at problem identification and impact.**

Conclusion. **Effective communication with adolescents is possible through many avenues. Children of the video age respond well to visual material. A violence prevention program should incorporate effective multimedia presentations. A variety of methods in combination proves to be most effective.**

INTRODUCTION

The United States is witnessing increasing proportions of violence associated with adolescents. According to the summary report of Healthy People 2000 (1), homicide is the second leading cause of death among all adolescents and is the number one cause of death among African-American youths. Suicides and homicides in school-aged children have more than doubled over the past decade (2). Putative causes of violent behavior include biologic forces, prenatal substance abuse, head injury, media violence, intergenerational violence, socioeconomic status, machismo, poor role models, breakdown of family stability, gangs, and the availability of weapons (3).

The United States Department of Health and Human Services has reported that low socioeconomic status is the most significant risk factor for death due to violence (1). More than half of the victims of homicide are killed by relatives or acquaintances, usually peers in race, age, and neighborhood, and the majority are murdered with guns (4). The Centers for Disease Control and Prevention (CDC) predicts that firearm-related deaths will surpass death by motor vehicle crashes in the United States by the year 2000 (5). Criminologists expect a rise in juvenile crime of 114% over the next decade (3). By the time the average child finishes elementary school, he will have witnessed 8000 murders and 100,000 other acts of violence on television. The impact on health care is enormous. The nation spends an estimated $4 billion on firearm-related injuries every year (6).

A retrospective study in Washington, DC, found that the typical gunshot victim spent 16 days in an intensive care unit with the following charges: room, $1487 per day; medications, $13,580; x-rays, $2738; other supplies, $16,280. Not included were the costs of nursing care, physical therapy, other outpatient costs or physicians' fees, which would bring the total to well over $100,000 per victim. In Connecticut, murder rates are at an all-time high in some cities, with those arrested for homicide being under 19 years of age more than 20% of the time (7).

Healthy People 2000 has challenged the health care profession to reduce homicide rates to no more than 7.2 per 100,000 people (15% decrease), and to reduce assault injuries by 10% (1). In response to the alarming rise of violence in adolescents, many communities and health care agencies have initiated violence prevention strategies. An innovative approach to youth violence prevention was designed and implemented at our level II trauma center. The model for the program was a youth violence prevention program in Hartford, Connecticut (7). The purpose of our study was to try to identify the most effective medium for communicating with adolescents in a violence prevention program with the intent to modify our program as needed to have the most impact on the attendees.

METHODS

The Stamford Hospital is a state-designated, American College of Surgeons-Verified Level II Trauma Center. As such, it is responsible for implementing prevention programs. The program developed at The Stamford Hospital has been a collaborative effort among the hospital and the school system, Parent-Teacher council, and the Stamford Police Department. The violence prevention program consists of bringing area students into the hospital to tour the

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trauma room, the operating room, and the intensive care unit. The students are then taken to the police department to experience the booking process, the jail cells, and hear the perspectives of the police detectives. Throughout the program, there are discussions regarding the adverse consequences of violent behavior. The students follow a mock trauma victim through the system and a perpetrator through the process of arrest and incarceration. Role playing is included at the end of the program to help students practice conflict resolution skills.

A limitation of this program is that only a small number of students can be accommodated by the hospital at any one time. In addition, the program requires many resources and can only be offered four or five times a year. Even if only high-risk students are brought through the program, the overall impact of the program may be marginal. To attempt to address this limitation, the prevention team developed a traveling version of the program. The goal of the traveling version was to try to capture some of the essence of the in-hospital program in communicating the problem of violence. This concept enabled the violence prevention team to reach many more students at once and to reduce the resources required for each program.

The traveling program was presented at a local school to a group of 115 fifth-through-eighth graders who had never come to the hospital-based program. The group was of mixed gender and varied in socioeconomic status. The program included four essential components, each of which used a slightly different approach to communicate the problem of violence with the purpose of discouraging violent behavior.

The first part was a discussion of what constitutes violence. The students were asked to suggest types of violence, while a list was kept on an easel at the front of the room for all to see. The discussion portion continued by identifying anger as both a normal human characteristic and a motivator of violence. This was followed with a dialogue on healthy and unhealthy ways people deal with anger and conflict. The students were asked, "What do people do when they are angry?" Their responses were written down on the easel. Each contribution to the list was identified by the students as "healthy" or "unhealthy."

"Fighting," which was described as both healthy and unhealthy, was then focused on to identify possible consequences. Each consequence offered by the students was labeled "good" or "bad." The list of bad consequences was longer the list of good consequences, so the students agreed to list it as an unhealthy way to deal with anger and conflict. The entire discussion lasted approximately 15 minutes.

The second portion of the program featured a 5-minute rap music video, which was shown to the students. The video comprised a series of images and graphs identifying the frequency of violence, along with photographs of victims in the trauma room, all shown in time with the beat of rap music. The video was followed by comments from the presenters and questions from the students.

The next part of the program was a segment from a commercially produced videotape of an interview with a Connecticut youth who had been shot and was paralyzed. During the interview, the victim related a detailed description of the activities surrounding the event, including mentioning a mall familiar to the students attending this program. The victim also displayed his anger and frustration at being assaulted and disabled, as well as his passing desire for revenge. This segment lasted approximately 10 minutes and was followed by comments from the prevention team and questions from the students.

The final segment of the program included a videotape of the trauma team responding to a simulated trauma code at our trauma center. The footage included the emergency physician giving details regarding an incoming victim to the responding trauma team and the activities of the trauma team during the resuscitation. This was followed by comments from the presenters and a question-and-answer period. After each segment, the discussion focused on the problem of violence and the consequences of violent acts on people's lives. The program ended with discussion about conflict resolution techniques.

The ultimate goal of the prevention team was to discourage violent behavior among those attending the program. Because the tracking of student behavior after the program was not possible, a survey was distributed 1 month after the program to assess its impact and effectiveness. The survey was used to evaluate the students' subjective impression of how well each portion showed the problem of violence and helped others to be less violent.

The survey included three direct questions on each component, to measure retention, problem identification, and effectiveness. The last portion of the survey asked for an overall rating of the program in presenting the problem of violence and in helping others be less violent. Additionally, a single, multiple-choice question asked the student to identify the main message of the program.

A Likert-type scale of 1 to 5 was used to distinguish the degrees of retention, problem identification, and effectiveness. This approach allowed for comparison among the components of the prevention program as to their relative success at meeting the goals. The survey instrument is appended (Fig. 1).

RESULTS

The survey was distributed by school personnel to all the students who had attended the program. Ninety-nine surveys were returned, representing an 86% rate of return. The average response on the Likert-type scale was calculated for each question related to each part and is demonstrated in Table 1.

The combined total of each part of the program demonstrates the relative value it was given by the students in retention, identification of the problem of violence, and effectiveness in discouraging violence. The commercial video of the paralyzed victim was most highly valued when combining all three categories, ranking highest in retention and impact, but the rap music video was best at identification of violence as a problem. The music video ranked second in the combination of retention, identification of violence as a problem, and impact. The ranking of the program as a whole was higher than any of the parts, suggesting the value of using a combination of methods to address the issues.

The multiple-choice question revealed that 90% of students correctly identified the main message of the program as being either, "We shouldn't be violent because there are no winners" or "Stop the violence." According to the prevention team, either answer was considered a positive response reflecting the intention of the program.

DISCUSSION

The problem of violence among our youth is on the rise. State and community-based efforts in violence prevention are being used to reduce the amount of violence and violence-related trauma among adolescents. The Public Health Service Agencies and the Departments of Education, Justice, and Transportation sought to identify potential strategies for influencing multiple health-risk behaviors such as alcohol and drug use, sexual activity, smoking, and violence (8). Focus group methodology was used to collect information. One hundred sixty youths between the ages of 10 and 18 participated. Additional insights were obtained when focus groups

On May 10, during your Health Fair you saw a presentation by Jim Tucker and Julie Stewart from the Stamford Hospital Trauma Team. During the program you saw 3 videos and had a discussion about anger. The first video had pictures of injured patients, statistics, and rap music. The second video was an interview with a boy named Sean who was shot and is now paralyzed and in a wheelchair. The third video was a clip of the trauma team at work in the hospital's ER. The questions below are about these parts of the program.

VIDEO OF PICTURES, STATISTICS. WITH RAP MUSIC

1. How well do you remember this video?
   Not At All 1 2 3 4 5 Very Well
2. On a scale of 1 to 5, how good was this video at showing the problem of violence?
   Not Good 1 2 3 4 5 Very Good
3. How good do you think this video can be at helping others be less violent?
   Not Good 1 2 3 4 5 Very Good

DISCUSSION OF ANGER

1. How well do you remember this discussion?
   Not At All 1 2 3 4 5 Very Well
2. On a scale of 1 to 5, how good was this discussion at showing the bad results of anger?
   Not Good 1 2 3 4 5 Very Good
3. How good do you think this discussion can be at helping others be less violent?
   Not Good 1 2 3 4 5 Very Good

VIDEO OF PARALYZED BOY NAMED SEAN

1. How well do you remember this video?
   Not At All 1 2 3 4 5 Very Well
2. On a scale of 1 to 5, how good was this video at showing the problem of violence?
   Not Good 1 2 3 4 5 Very Good
3. How good do you think this video call be at helping others be less violent?
   Not Good 1 2 3 4 5 Very Good

VIDEO OF HOSPITAL TRAUMA TEAM IN THE ER

1. How well do you remember this video?
   Not At All 1 2 3 4 5 Very Well
2. On a scale of 1 to 5, how good was this video at showing the problem of violence?
   Not Good 1 2 3 4 5 Very Good
3. How good do you think this discussion can be at helping others be less violent?
   Not Good 1 2 3 4 5 Very Good

OVERALL

1. The main message of the program was (circle the one best answer):
   a. Anger is wrong.
   b. Working at the trauma center is fun.
   c. We shouldn't be violent because there are no winners
   d. Stop the violence.
   e. Guns kill people
2. On a scale of 1 to 5, how good was this program at showing the problem of violence?
   Not Good 1 2 3 4 5 Very Good
3. How good do you think this program can be at helping others be less violent?
   Not Good 1 2 3 4 5 Very Good

FIG 1. Post-program survey.

were held with 70 parents and grandparents of youths of similar ages. Groups were held in Washington, DC, Chicago, Los Angeles, Houston, and rural Maryland. African-American, white, Hispanic, and American Indian youths participated in the groups.

The groups were divided by age, race and ethnicity, and gender. Focus group facilitators were recruited through leaders of community-based organizations. Findings of this study among the teens were notable. Although the participants were well informed about the consequences of risky health behaviors, they spoke of engaging in these behaviors as common in the high-risk environments in which they lived. Knowing why the practices were harmful was not enough to help them change their behavior. Many of the participants stated they wanted to relate to someone who knew what they were going through and whom they could trust. Needs identified included skills building and support systems to reinforce their high-level of awareness.

The findings suggest that prevention of risky health behavior education should be comprehensive. Nonjudgmental, interpersonal communication via community-based programs in high-risk environments should be instituted. Our program emphasizes a "no-preaching" atmosphere, with the objective of communicating in an open and friendly manner with our students.

In 1989, the trauma service at Washington Hospital initiated a violence-prevention project in an effort to decrease injuries and

TABLE 1
Results of the questionnaire given to attendees of a violence prevention program

Violence program part	Retention	Identification of problem	Impact	Total
Rap music video	3.687	4.040	3.455	11.182
Discussion of anger	2.919	3.222	3.242	9.383
Paralyzed victim video	3.798	3.838	3.758	11.394
Trauma team video	3.667	3.333	3.253	10.253
Overall program	N/A	4.080	3.707	

Rating scale was 1 (not useful) to 5 (very useful).

deaths associated with violence in the community (9). Concentrating on high-risk groups, a multidisciplinary approach to violence prevention was initiated in a classroom-based setting. A multivariate analysis was compiled from data obtained during the program. The authors found that students who had participated in the study were much less likely to define social problems in adversarial ways, were less likely to offer violent solutions when given hypothetical conflict scenarios, and listed a greater number of negative consequences to using violence in conflict situations. The participants were also able to identify more risk factors than the control group. There was no increase in the students' abilities to identify viable solutions using a nonviolent approach.

Television has had a tremendous influence on children. As a result, children of the video age need highly visual stimuli to communicate information. The program we offer in the hospital is filled with graphic and visually stimulating scenes as the students tour the various departments. The challenge of reaching more students through the traveling version of the program mandates a combination of visually appealing media with discussions of conflict resolution.

Our prevention efforts are based on the work of our colleagues at St. Francis Medical Center in Hartford, Connecticut (7). Their group studied over 1000 youths who had participated in their program, a 3-hour, multimedia presentation on youth violence prevention. Of the youths responding, 82% felt the program was successful in educating them about the causes and consequences of violence, and 77% agreed that the theater form of presentation was effective in demonstrating nonviolent means of dealing with difficult situations.

Similar perceptions were registered by the adolescents who participated in our study. Of the 99 students who responded, the highest ratings for retention, problem-identification, and impact were given to the commercial video (combined category ranking of 11.394) and rap music (11.182). The trauma resuscitation video and the discussion of anger were ranked as being less effective (10.253 and 9.383, respectively). The audience felt they understood the main point of the program and ranked the program as a whole higher than any of the parts when measured by success at problem identification and impact categories.

We agree with many previous authors (10–13) that trauma surgeons and trauma centers must become involved in violence prevention. In 1996, Tellez and Mackersie (10) conducted a survey of trauma surgeons and reported that violence prevention programs were established in only 55% of hospitals responding and that only 26% of survey respondents are personally involved in violence prevention. The challenge was best stated by Schwab and Kauder (11), who clearly stated why trauma surgeons are most suited to lead the violence prevention effort. Rosenberg (12) outlined 10 steps that institutions can take to establish effective violence prevention programs. This should be required reading for trauma surgeons as they begin their violence-prevention initiatives.

Research to date has focused on whether youths benefit from violence-prevention programs, and which types of programs will have the most impact in preventing youth violence. Effective communication with adolescents is possible, as is evidenced by the various studies reviewed. Many avenues are possible for presenting information on violence prevention. With the limitations of hospital-based programs, traveling programs may prove beneficial if they incorporate a variety of visually stimulating methods of communication. We recognize the limitations of a study such as ours in that it is not possible to determine whether positive behavioral change will occur as a result of our program. Long-term follow-up of participants in such programs would be necessary to determine behavioral outcomes. As Coyler and associates (14) have observed, violence-prevention programs may actually lead to negative feelings among participants. We suggest that future research focus on specific media to discover what has the most impact on preventing violence in the high-risk youth population. Additional research could explore whether including parents or entire families in developing strategies to prevent youth violence would have greater impact in reducing violence potential in the high-risk groups.

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