

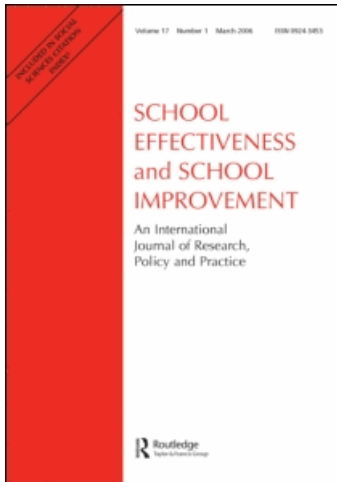
This article was downloaded by: [University of Virginia]

On: 23 September 2008

Access details: Access Details: [subscription number 785020476]

Publisher Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



School Effectiveness and School Improvement

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title-content=t714592801>

Response of school personnel to student threat assessment training

Korrie Allen ^a; Dewey Cornell ^b; Edward Lorek ^a; Peter Sheras ^b

^a Department of Pediatrics, Eastern Virginia Medical School, Norfolk, Virginia, USA ^b Curry School of Education, University of Virginia, Charlottesville, Virginia, USA

Online Publication Date: 01 September 2008

To cite this Article Allen, Korrie, Cornell, Dewey, Lorek, Edward and Sheras, Peter(2008)'Response of school personnel to student threat assessment training', School Effectiveness and School Improvement, 19:3, 319 — 332

To link to this Article: DOI: 10.1080/09243450802332184

URL: <http://dx.doi.org/10.1080/09243450802332184>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Response of school personnel to student threat assessment training

Korrie Allen^{a*}, Dewey Cornell^b, Edward Lorek^a and Peter Sheras^b

^a*Department of Pediatrics, Eastern Virginia Medical School, Norfolk, Virginia, USA;*

^b*Curry School of Education, University of Virginia, Charlottesville, Virginia, USA*

(Received 12 October 2007; final version received 17 April 2008)

School safety has become an important area of concern for school improvement. This study examined the effects of staff training as means of improving school responses to student threats of violence. A multidisciplinary sample of 351 staff from 2 school divisions completed pre-post training surveys as part of a 1-day training program using the *Guidelines for Responding to Student Threats of Violence* (Cornell & Sheras, 2006). Analysis of pre-post surveys found large changes in staff attitudes toward school safety and violence prevention efforts. There was a substantial decrease in concerns about school homicide and increased awareness of effective violence prevention efforts. There was a drop in support for zero tolerance and profiling approaches, along with increased knowledge of threat assessment principles and concepts. These changes were sustained across school divisions serving a challenging urban population and a more affluent, suburban population. Similar effects were found across all school personnel. These findings demonstrate the viability of training staff in a student threat assessment approach.

Keywords: student violence; threat assessment; school safety; professional developments

Introduction

School safety is a relatively new topic for the field of school effectiveness and school improvement research. Traditionally, school effectiveness research has focused on student achievement, and school improvement efforts have aimed at teaching and learning outcomes (Creemers, 2002). In previous decades, safety may have been taken for granted and its role overlooked in effective schools, but as Roland and Galloway (2004) observed, “positive social behaviour may be a necessary, but not a sufficient condition for good academic outcomes” (p. 243). A developing body of evidence points to school safety as an important condition for learning. Safe and orderly schools are necessary so that teachers can devote their time and energy to instruction and students can engage in learning without being distracted by safety concerns (Bowen, Bowen, & Ware, 2002; Osher, Dwyer, & Jackson, 2004). School safety can affect all students (and teachers), whether they are victims, nonvictims, or violators. Many studies show that victims of aggression suffer from impaired concentration, motivation, and engagement in learning that leads to lower academic achievement (Graham, Bellmore, & Mize, 2006; Juvonen, Nishina, & Graham, 2000).

*Corresponding author. Email: allenk@evms.edu

The most prominent school improvement efforts concerning student aggression and school safety have taken place in the field of bullying prevention, starting with the Olweus Bullying Prevention Program (Olweus, 1993) and a series of nationwide school improvement efforts in Norway (Roland, 2000). A common theme across school improvement initiatives aimed at bullying has been efforts to increase teacher awareness of bullying as a problem and willingness to intervene when bullying is identified (Olweus, 1993; Smith, Schneider, Smith, & Ananiadou, 2004). Ma's (2002) research on middle school bullying found that a positive disciplinary climate was associated with reduced levels of bullying. Roland and Galloway (2004) emphasized the importance of consensus and cooperation among school staff for school effectiveness and school improvement. This is particularly important for school safety because consensus among school staff is vital to implementing efficient and effective responses to student threats of violence.

The present study investigated a relatively new model to address student threats and improve school effectiveness through the use of a threat assessment approach. Threat assessment focuses on using a problem-solving approach to investigate student threats of violence rather than methods such as zero tolerance (i.e., suspension or expulsion). We evaluated whether threat assessment training would make school personnel more willing to distinguish serious from less serious threats and to endorse attitudes consistent with a problem-solving approach to student threats of violence.

Student threats of violence

The landscape of school safety in the USA changed dramatically with the eruption of a series of rampage school shootings in the 1990s. Especially after the 1999 shooting at Columbine High School, educational administrators in the USA came under pressure to assure the public that schools are safe and secure (Cornell, 2003). The shootings in 2005 at Red Lake High School in Minnesota, in 2006 at the Amish school in West Nichols Mines, Pennsylvania, and in 2007 at Virginia Tech, garnered worldwide attention and have kept the issue of school safety in the foreground of national concerns. School shootings that killed 18 people in Erfurt, Germany, in 2002 (CNN, 2002) and 8 people in Tuusula, Finland, in 2007 (CNN, 2007) demonstrated that the problem is not confined to the USA. For these reasons, school safety is a valid consideration in the school effectiveness and school improvement movement.

Although the likelihood that a student will commit a serious act of violence at school is low, and schools enjoy a lower rate of violent crime than most other settings (Cornell, 2006; DeVoe, Peter, Noonan, Snyder, & Baum, 2005), student threats to commit a violent act (especially to assault a peer) are relatively common (Singer & Flannery, 2000). Moreover, students are stimulated to make even more threats following a high profile incident. For example, in the 50 days after the Columbine shooting, Pennsylvania schools reported 354 threats of school violence, compared to 1 or 2 threats per year before 1999 (Kostinsky, Bixler, & Kettl, 2001). The combination of high threat rates and low likelihood of violence creates a serious dilemma for school authorities, who must take all threats seriously because the potential consequences are so severe.

The American response to school shootings was not guided by a working model or theory of violence prevention. Instead, schools substantially increased their safety and security measures and paid relatively little attention to preventive measures. Many schools installed security devices such as metal detectors and video monitors and employed increasing numbers of law enforcement officers and security officers (e.g., Flaherty, 2001; Hill, 1998).

One of the most important policy changes was the expansion of zero tolerance discipline (Skiba & Rausch, 2006). The National Center for Education Statistics report *Violence and Discipline Problems in U.S. Public Schools: 1996–1997* (Heaviside, Rowand, & Farris, 1998) defined zero tolerance as a policy that mandates predetermined consequences or punishments for specified offenses and reported that 94% of all schools have zero tolerance policies for weapons or firearms. Zero tolerance typically refers to a policy of mandatory expulsion or long-term suspension for violation of a school prohibition. The critical feature of zero tolerance is that punishment is applied without consideration of the student's intent or the circumstances of the violation. Minor and unintentional violations are treated like more serious ones. As a result, there have been numerous cases of students being expelled for seemingly minor offenses such as bringing a plastic knife to school, pointing a finger like a gun, or shooting a paper clip with a rubber band (Cornell, 2006; Skiba & Rausch, 2006).

Despite the widespread adoption of zero tolerance, scientific reviews indicate little or no support for it as a prevention method (Arcia, 2006; Skiba & Rausch, 2006). There are no empirical studies demonstrating that zero tolerance increases school safety. Skiba and Peterson conducted a 4-year study which found that, over the course of the 4 years, schools with a zero tolerance policy had higher levels of crime than schools without a zero tolerance policy (Skiba & Peterson, 1999). Furthermore, the consequences for students can be severe. Students who have high suspension rates are five grades behind their peers based on reading scores (Arcia, 2006) and are three times more likely to drop out of school (Skiba & Peterson, 1999). Zero tolerance has been described as “ineffective as a deterrent, unproductive in teaching appropriate behavior, and useless in promoting a safe school climate” (Arcia, 2006, p. 360). Therefore, multiple agencies sought to develop an alternative approach to address student threats of violence over the last decade.

Development of the threat assessment approach and guidelines

Within 3 months of the Columbine shooting, the Federal Bureau of Investigation (FBI)'s National Center for the Analysis of Violent Crime held a national conference on school shootings that included experts in law, mental health, and education and involved an examination of schools that had either experienced or averted a rampage shooting (O'Toole, 2000). One purpose of the conference was to consider the advisability of a profiling approach to the prevention of school violence. The basic theory of criminal profiling is that offenders who commit similar types of crimes have a common set of behavioral or psychological characteristics that can be used to identify them.

Conference experts concluded that there was no profile or set of individual characteristics that could be used to accurately identify school shooters within the general student population and advised against a “profiling” approach. However, it was noted that almost all of the students who committed rampage shootings had communicated direct or indirect threats of violence in the weeks or months prior to their violent attack, but those threats were not reported to authorities or were not adequately investigated. (The students did not necessarily directly threaten their intended victims; more often, they talked about committing a violent act or confided their intentions to classmates.) In contrast, in those schools where a shooting had been averted, the student's threatening statements were reported to authorities, investigated, and found to be a serious threat that prompted protective action. These observations led the FBI to recommend that schools establish procedures to investigate and respond to student threats (O'Toole, 2000).

The Secret Service conducted its own study of school shootings and reached similar conclusions about the inadvisability of developing a school shooter profile (Vossekuil, Fein, Reddy, Borum, & Modzeleski, 2002). In a further report, the Secret Service, in collaboration with the U.S. Department of Education, advised schools to take a “threat assessment” approach to the prevention of targeted violence (Fein et al., 2002). Threat assessment was developed by the U.S. Secret Service as a systematic means of determining whether an individual poses a serious threat to commit an act of targeted violence (Fein, Vossekuil, & Holden, 1995).

Although both the FBI and Secret Service reports (Fein et al., 2002; O’Toole, 2000) made a compelling case for student threat assessment, schools had no experience with this approach and there were many questions concerning the practical procedures that should be followed, how the process would work, and what the outcomes would be. This is a familiar array of questions in the school effectiveness field (Creemers, 2002). In response to these questions, researchers at the University of Virginia, in collaboration with educators from two local school divisions, developed a set of guidelines for school administrators to use in responding to a reported student threat of violence (Cornell, 2003). The rationale for this approach was that a group of educational researchers and psychologists who were designing the protocol would benefit from the knowledge and advice of experienced school administrators, school resource officers, and school psychologists.

The school administrators urged that the procedures needed to be efficient and streamlined in most cases, because most student threats are not serious threats of violence. Therefore, the guidelines included a decision-tree that began with an initial assessment of the seriousness of the threat, followed by a determination whether the case could be easily resolved as a transient threat or would require more extensive assessment and protective action as a substantive threat. In the most serious cases, a multidisciplinary team would conduct a comprehensive safety evaluation that would include both a law enforcement investigation and a mental health assessment of the student.

Implementation of the threat assessment approach

During the 2001–2002 school year, the threat assessment guidelines were field-tested in 35 public schools encompassing an enrollment of more than 16,000 students in grades K-12 (Cornell et al., 2004). School-based teams evaluated 188 student threats that involved threats to hit, stab, shoot, or harm someone in some other way. Most of the threats (70%) were resolved as transient threats, such as comments made in jest or in a fleeting moment of anger. The remaining 30% were substantive threats that required more extensive assessment and protective action to prevent the threat from being carried out. The threat assessment teams placed special emphasis on understanding the context and meaning of the threat and developing a plan to address the underlying conflict or problem that stimulated the student to resort to threatening behavior. Use of this problem-solving approach meant that relatively few students received long-term suspensions or expulsions from school. Only three students were expelled from school, although half of the students (94) received short-term suspensions (typically 1–3 days). Notably, follow-up interviews with the school principals found no cases in which the threats were carried out. These findings supported the feasibility and viability of threat assessment as a method that could be used in schools, but it remained unclear whether school staffs could be readily trained to adopt a threat assessment policy.

In order to lead schools on the implementation of a threat assessment approach, Cornell and Sheras (2006) developed 1-day training workshop and published a

145-page manual, *Guidelines for Responding to Student Threats of Violence*, based on the field-test findings and observations. The workshop covers the rationale and basic principles of threat assessment, which are then presented in more detail in the manual (detailed description provided in the Methods section). However, training educators in threat assessment poses a substantial challenge. Educators are burdened by numerous administrative and curricular responsibilities, such as mandated testing and new standards for school accreditation, which make it difficult to allocate time and energy to even 1-day of violence prevention training. Moreover, like the general public, educators have been exposed to numerous high-profile cases of school shootings that create a heightened perception of risk and imminence. Educators have the responsibility to assure student safety and anticipate intense scrutiny whenever there is a case involving a student threat, regardless of the circumstances or actual danger posed by the student. Most public schools function in an environment that strongly supports zero tolerance approaches, which are mandated by state and federal laws for many student infractions. In the state of Virginia, where this study took place, state laws substantially broaden the federal standard of zero tolerance for firearms, with the result that Virginia has one of the highest expulsion rates in the nation (U.S. Department of Education, Office of Safe and Drug-Free Schools, 2007).

It has long been recognized that for school improvement of any kind to be successful, the school culture must be altered (Creemers, 2002). Behavioral theories of effective school improvement hold that “schools do not change if the people within the schools, particularly the teaching staff, do not change” (Creemers, 2002, p. 350). Schools that are oriented toward zero tolerance necessarily have a strict and rigid structure that permits no flexibility or judgment in responding to student threats. Such an approach would be incompatible with a threat assessment model, which stresses an individualized assessment and problem-solving approach. Therefore it is necessary to examine the response of school staff to training in threat assessment and whether they would be responsive to the values, attitudes, and concepts of this different perspective.

Grodsky and Gamoran (2003) hypothesized that professional development goes beyond individual teacher improvement to benefit the entire school as a professional community. Professional development instills not only a common base of knowledge but also shared values and an atmosphere of collaboration that leads to school improvement. However, their study only examined teachers and did not consider the wider, multidisciplinary community of teachers, administrators, counselors, psychologists, law enforcement officers, and others who make up the typical American secondary school. School safety requires the involvement of all school personnel, and threat assessment is designed as a multidisciplinary approach that requires the cooperation of school administration, law enforcement, and mental health professionals. Training information and materials must address the differing values, interests, and perspectives of a professionally diverse audience and persuade them to work together on a new approach in a high-stakes situation. For this reason, it is important to examine how school personnel might differ in their response to training.

Finally, there are often substantial differences between school divisions in the student populations they serve. As Levin (2006) has noted, the field of school improvement has often failed to recognize the importance of social context and to demonstrate that an approach can be effective in high-challenge schools and communities. It is likely that educators in more affluent school divisions might be more receptive to staff training and less fearful about the problem of school violence than educators in school divisions serving a more challenging population. Schools that experience a high rate of student aggression might be more inclined to favor zero tolerance policies that minimize their contact with

students they perceive as potentially dangerous. Therefore, this study examined training effects in an affluent, suburban school division and a less affluent, urban system.

In conclusion, there were three primary objectives of this study. First, we examined whether student threat assessment training changed knowledge and attitudes about school violence from pre- to post-training. Second, we assessed how school personnel from different disciplines differed in their response to the training. Lastly, we investigated training effects among participants from two diverse school districts.

Method

Participants

The participants consisted of school personnel from two Virginia school divisions who attended separate full-day training workshops on the *Guidelines for Responding to Student Threats of Violence* (Cornell & Sheras, 2006). Because of socioeconomic and demographic differences between the two school divisions, the samples of school personnel were compared in some analyses.

Division A consisted of 66 schools enrolling more than 50,000 students in grades K-12. Fourteen percent of the students were eligible for free or reduced cost meals. The student population included 81% White, 7% African American, 7% Hispanic, and 8% other groups. The average teacher salary was approximately \$59,000 per year.

Division B consisted of 21 schools enrolling more than 15,000 students. Fifty-two percent of the students were eligible for free or reduced cost meals. The student population included 36% White, 60% African American, 2% Hispanic, and 2% other groups. The average teacher salary was approximately \$33,000.

School divisions were advised that the training was designed to prepare threat assessment teams for each school and that these teams would consist primarily of school administrators, psychologists, counselors, and law enforcement officers, but that other school staff could participate at the school's discretion. The school superintendent's office for each division determined which personnel would attend the workshop. As a result, the sample from Division A included 186 school personnel and the sample from Division B included 164 school personnel. Approximately three quarters of both samples were women, but there were substantial differences in ethnicity: 87% of the personnel from Division A were White and 8% were African American, whereas 44% were White and 53% African American in Division B. Additionally, in terms of occupation distribution, Division A and Division B had a fairly equal representation of principals and assistant principals attending the training (Division A = 21% and Division B = 26%). Conversely, 34% of the personnel from Division A were counselors, whereas only 10% were counselors from Division B.

Measures

The evaluation instrument was developed from a content analysis of the threat assessment training manual and information covered in the workshop. Items were developed by the researchers to cover key points from the training (e.g., that rates of school violence are declining and that the risk of school shootings is remote) as well as the ability to apply the threat assessment guidelines to classify student scenarios as transient or substantive threats. Two experienced workshop trainers reviewed the items for accuracy and appropriateness. A final pool of 20 items was presented on both the pre-training and post-training forms. Preliminary analyses indicated that 6 items did not contribute to an

increased internal consistency and so were dropped from the scale. The resultant 14 items had Cronbach's alpha values of .68 at pre-training and .72 at post-training. These values are not high enough to indicate that the knowledge scores are homogeneous measures of a single construct but are considered acceptable for more complex constructs that should be considered indexes rather than scales (Streiner, 2003).

The post-training survey also included six items designed to assess participant satisfaction with the training (e.g., "The training provided the right amount of practical information"). Analysis of the internal consistency of the six items revealed that one item ("The training could have been shorter") reduced the alpha value and so was dropped from the scale. The final five items generated an internal consistency of .86.

Procedure

Study procedures were reviewed and approved by the Institutional Review Boards at Eastern Virginia Medical School, Old Dominion University, and the University of Virginia. Separate 1-day training workshops were conducted for each school division shortly before the beginning of the school year. The two workshops were conducted by the same pair of trainers using identical training materials. All participants completed a pre-training survey form immediately before the workshop and completed the post-test survey at the end of the day.

The staff training program used the *Guidelines for Responding to Student Threats of Violence* manual (Cornell & Sheras, 2006), which was designed to allay fears of violence and persuade staff to adopt a prevention-oriented, threat assessment approach to student threats of violence. The manual has received positive reviews by experts in school safety, school psychology, and violence assessment (Virginia Youth Violence Project, 2008). The 6-hr training provided a comprehensive overview of the manual and was divided into five sessions. The first session covered the nature and extent of violence in schools and the rationale for using a threat assessment approach as opposed to a zero tolerance approach. This session corresponds to the first chapter of the manual.

The second session described the composition of the threat assessment team and provided a step-by-step review of the threat assessment procedure and its decision tree. This session corresponds with chapters 2–4 of the manual, which describe the team, the resolution of transient threats, and the response to substantive threats, respectively.

The third and longest session covered psychological factors relevant to a potentially violent student and legal issues concerning confidentiality of student records and liability for student violence. This session condenses chapters 5–10 in the manual, which have much more detail than can be covered in an oral presentation. In the manual, the 5th chapter explains in detail how to conduct a mental health assessment of a student who has made a very serious substantive threat, including lists of interview questions, a template for a written report, and a sample completed report. The 6th chapter describes typical pathways to violence (such as distinguishing youth engaged in antisocial behavior from youth who are psychotic) that the team should be prepared to identify. The 7th chapter provides questions and answers to typical legal and procedural questions and the 8th chapter summarizes research findings from the field study of the guidelines. Chapters 9 and 10 cover strategies for schoolwide violence prevention and recommendations for working with students receiving special education services, respectively.

The fourth session consisted of small group analysis and discussion of three case exercises. The manual provides 16 additional case exercises in the appendix in a format that allows the teams to test themselves. The appendix also includes forms for

documenting a threat assessment and creating behavior support plans that can be freely photocopied by school staff. The final session, corresponding to the final chapter in the manual, reviewed the steps in implementing a threat assessment approach and any final questions or concerns.

Results

A 2×2 repeated measures analysis of variance (ANOVA) was used to examine pre-post differences in threat assessment knowledge for the two school divisions (see Table 1). There was a significant main effect for time, indicating a mean improvement from pre- to post-training, $F(1, 349) = 1671, p < .001, \eta^2 = .83$. There was also a difference between school divisions A and B, $F(1, 349) = 69.74, p < .001, \eta^2 = .17$. Post-hoc analyses of group means indicated that school Division A obtained higher knowledge scores than school Division B on both pre- and post-training surveys. The interaction between school division and time was also statistically significant, $F(1, 349) = 12.58, p < .001, \eta^2 = 0.04$, indicating greater change in Division B.

In follow-up to the ANOVA, we conducted matched pairs t tests on each of the 14 items, in order to assess the strength of association for each item (see Table 2). All items showed a statistically significant ($p < .001$) change, with effect sizes (d) ranging from .28 to 1.57. These effect sizes are associated with substantial changes in the views endorsed by training participants (detailed tables are available upon request). For example, prior to training, only 18% of school personnel (marking *agree* or *strongly agree*) recognized that violence in schools has actually decreased during the past 10 years school, but after training more than 90% recognized this fact. Prior to training, about one in five participants (21.1%) had concerns that a homicide could occur in their school and another 23% were uncertain; whereas after training, only 5.4% were concerned and 9% were uncertain about a homicide, with a full 84.9% not concerned. Well over half of participants (58.7%) agreed with the need for zero tolerance before training, compared to just 12.2% after training. Recognition that violence prevention programs could reduce school violence increased from 41% to 90.1%.

The post-training satisfaction items indicated that the vast majority of participants had a favorable view of the training. Overall, 90% of the participants agreed that the training “improved my understanding of school violence, 90% agreed that the “resource materials (handouts, audiovisuals) enhanced the training,” 94% agreed that “I understand the basic concepts and guidelines for conducting a threat assessment,” 91% agreed that “the training contained the right amount of practical information,” and 94% agreed that the training “will be helpful to me in responding to student threats of violence” (see Table 3). The

Table 1. Pre-post training effects for two school divisions.

School Division	Pre-training		Post-training	
	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)
Division A	46.7	(6.46)	61.8	(5.56)
Division B	41.0	(6.12)	58.9	(6.41)
Combined	44.0	(6.86)	60.5	(6.13)

Note: Items were answered on a 5-point scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). In order to generate a total composite score, items were recoded so that higher scores indicated responses in the desired direction. Total scores for the 14 items could potentially range from 14 to 70.

Table 2. Pre-post changes in training survey items.

Training Survey Items	Pre-training	Post-training	<i>t</i> value ¹	<i>d</i>
<i>Attitudes and concerns about school violence</i>				
1. Violence in schools has increased over the past ten (10) years. (<i>Disagree</i>)	2.14	4.58	29.4	1.57
2. I am concerned that a homicide could occur in my school. (<i>Disagree</i>)	3.54	4.29	11.9	0.63
3. The probability that a student will kill someone at school is so low that the average school will experience it about once every 12,000 years. (<i>Agree</i>)	2.59	4.74	27.3	1.46
4. The typical school violence prevention program can reduce fighting by 50%. (<i>Agree</i>)	3.30	4.58	19.5	1.04
5. Profiling is an effective method to identify students who may commit violent acts. (<i>Disagree</i>)	3.43	4.57	15.32	0.82
6. We need zero tolerance for student threats of violence in my school. (<i>Disagree</i>)	2.35	4.05	21.0	1.12
<i>Knowledge of threat assessment guidelines</i>				
7. A safety plan should be implemented for a transient threat. (<i>Disagree</i>)	2.58	3.95	15.82	0.84
8. If a student threatens an act of violence, immediate suspension is necessary. (<i>Disagree</i>)	3.08	4.07	13.44	0.72
9. When deciding whether a threat is transient or substantive, you should consider the student's age, credibility, and previous discipline history. (<i>Agree</i>)	3.84	4.21	5.17	0.28
10. If the student's behavior constitutes a serious discipline violation, it should automatically be deemed a substantive threat. (<i>Disagree</i>)	2.74	3.70	12.66	0.68
11. In order to collect more accurate information when conducting an interview with a student, the student should be reassured that any information reported is confidential. (<i>Disagree</i>)	3.27	4.40	15.14	0.81
12. Specific plausible details are an indication that a threat is probably substantive. (<i>Agree</i>)	3.96	4.26	5.64	0.30
13. Conflict between students of equal status and strength constitutes bullying. (<i>Disagree</i>)	3.60	4.58	14.06	0.75
14. Mental health assessments (as part of a threat assessment) are not designed to predict violence, but to understand what motivated the student to make a threat and how to prevent violence. (<i>Agree</i>)	3.66	4.69	16.29	0.87

Note: ¹All comparisons are statistically significant at $p < .001$. $N = 351$. Items were answered on a 5-point scale ranging from *Strongly Agree* to *Strongly Disagree*. The desired response is indicated after each item in parentheses. Items were recoded so that higher scores indicate responses in the desired direction.

correlation between pre-training knowledge and training satisfaction was significant, $r = .15$, $p < .05$, as well as the correlation between post-training knowledge and satisfaction, $r = .28$, $p < .001$.

Analyses of occupational differences combined school divisions A and B so that there would be larger cell sizes for each occupational category. A 2×5 repeated measures analysis of variance (ANOVA) was used to examine pre-post differences in threat assessment knowledge for the five largest occupation categories (principals, psychologists, counselors, social workers, and officers). As would be expected, there was again a significant main effect for time, indicating a mean improvement from pre- to post-training, $F(1, 247) = 936.44$,

$p < .001$, $\eta^2 = .79$. There was also a difference between occupation categories, $F(4, 247) = 12.59$, $p < .001$, $\eta^2 = .20$. The interaction between time and occupation was not statistically significant. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the school psychologists was significantly higher than all other occupations and that officers scored lower than all other occupations, but there were no significant differences among guidance counselors, principals, and social workers (see Table 4). Five paired-samples t tests were conducted to follow up the significant main effect for time. We controlled for family-wise error rate across these tests using Holm’s sequential Bonferroni approach. Differences in mean ratings of knowledge of the threat assessment procedures were significantly different across occupations from pre-training to post-training. All occupations showed a statistically significant ($p < .001$) change, with effect sizes (d) ranging from .76 for Principals to .88 for Social Workers (see Table 4). Lastly, a one-way ANOVA was conducted on overall satisfaction scores for each occupation. The analysis showed no statistically significant differences among occupations in satisfaction with the training.

Discussion

The U.S. federal government’s guiding legislation for schools, the No Child Left Behind Act of 2001 (NCLB) declares that school safety is a prerequisite to an orderly environment

Table 3. Means and standard deviations for post-training satisfaction items.

Items	School District A		School District B	
	<i>M</i>	(<i>SD</i>)	<i>M</i>	<i>SD</i>
This training improved my understanding of student violence.	4.4	(0.9)	4.5	(0.6)
The resource materials (handouts, audiovisuals) enhanced the training.	4.3	(0.7)	4.4	(0.8)
I understand the basic concepts and guidelines for conducting a threat assessment.	4.5	(0.6)	4.5	(0.6)
The training contained the right amount of practical information.	4.3	(0.6)	4.3	(0.7)
This training will be helpful to me in responding to student threats of violence.	4.5	(0.7)	4.5	(0.7)

Note: Items were answered on a 5-point scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). $N = 351$.

Table 4. Occupation differences for threat assessment knowledge pre- and post-training.

Occupation (<i>n</i>)	Pre-training		Post-training		<i>t</i>	η^2
	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)		
Principals (82)	46.1	(6.7)	60.1	(6.3)	-16.04*	.76
Psychologists (32)	50.7	(6.4)	64.6	(4.2)	-13.20*	.85
Counselors (79)	44.0	(5.4)	61.0	(5.2)	-22.18*	.86
Officers (31)	41.0	(6.9)	57.8	(5.9)	-11.06*	.80
Social Workers (28)	44.7	(5.3)	61.4	(5.4)	-13.93*	.88

Note: * $p < .001$. Items were answered on a 5-point scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). In order to generate a total composite score, some items were recoded so that responses were in the desired direction. Total scores could potentially range from 14 to 70. $N = 351$.

conducive to learning (Title IV, Part A, SEC. 4002). School safety is clearly on the agenda of school administrators as an important concern, but there is relatively little research on school safety improvement. The present study contributes to this gap in the literature by examining the response of school staff members to training on student threat assessment.

School personnel who attended training in student threat assessment showed substantial changes in their knowledge and attitudes regarding school violence, with a statistically large overall effect size (η^2) of .83. Personnel in both school divisions showed a clear decrease in fears of school violence and the adoption of attitudes consistent with a threat assessment approach. They expressed a willingness to adopt a problem-solving approach to student threats and conflicts, as distinguished from a more punitive, zero tolerance approach. They rejected profiling as a way to identify dangerous students and instead demonstrated understanding that student threats can be investigated and resolved. They differentiated between transient and substantive threats and understood that substantive threats require protective action to prevent an act of violence from being carried out.

The school effectiveness and school improvement literature highlights the importance of professional development as a means of strengthening the professional community in schools. Professional development has the function of not only individual staff benefits but also a schoolwide effect of improving collaboration and achieving greater consistency in values and attitudes (Grotsky & Gamoran, 2003). The results of the student threat assessment training showed that school staff across disciplines achieved greater consensus on their perceptions of school violence and their understanding of how student threats can be addressed.

Research on bullying prevention draws special attention to changing the professional culture in the school (Roland & Galloway, 2004). Like student threat assessment training, bullying prevention training attempts to give staff a shared understanding of student aggression and a common commitment to addressing it (Olweus, 1993).

The changes in staff attitudes toward school safety and student threats of violence are noteworthy because they have direct implications for school safety policies and disciplinary practices. Virginia's expulsion rate of .169 per 1,000 students is among the top five in the nation (U.S. Department of Education, National Center for Education Statistics, 2004). Moreover, Virginia has been at the forefront of nationwide efforts to place law enforcement officers in its schools, with officers in 95% of its high schools and 74% of its middle schools (Schuiteman, 2007). The endorsement of threat assessment by two of the nation's leading law enforcement agencies (O'Toole, 2000; Vossekul et al., 2002) may help school personnel to accept the shift to a less punitive and decidedly preventive approach.

Another positive finding is the consistency of results across occupational groups. Administrators, mental health professionals, and law enforcement officers alike expressed satisfaction with the training, and all groups showed similar changes in attitudes and knowledge regarding threat assessment. This is a noteworthy accomplishment for a training program, because these groups have markedly different disciplinary backgrounds and perspectives and play different roles in maintaining school safety and dealing with potentially dangerous students.

Despite the consistency across occupations, there were differences between the staffs of the urban school division and the more affluent suburban school division. The urban school staff members began the training with attitudes that were further removed from the training goals than those of the suburban staff members. The urban school serves a markedly less affluent population and has a higher rate of serious disciplinary violations. Although Division B enrolled approximately 1/3 as many students, this urban district reported approximately 5,900 serious disciplinary violations in the 2005–06 school year,

compared to just 2,700 in the larger, suburban Division A (Virginia Department of Education, 2007). Nevertheless, both divisions showed large training effects and the gap between the school divisions was narrower after training. These observations support the effectiveness of training in both types of school divisions, despite large differences in the rates of disciplinary violations they experience. The school improvement literature stresses that it is especially important to demonstrate effects in high-poverty schools where the need is greatest (Levin, 2006). Nevertheless, Levin (2003) suggested that the problems in high-poverty schools are linked to non-academic, community factors such as poor nutrition and inadequate housing, so that efforts to improve teaching and learning can only achieve limited success. School safety may be still another non-academic factor.

All of these results must be tempered by the caveat that changes were measured immediately after training, when participants might be most inclined to agree with what they had been taught. It would be a useful next step to examine the long-term stability of training effects and to show how they affected decision-making in actual cases. A field-test of threat assessment in two other Virginia school divisions did demonstrate that school personnel resolved 188 student threats of violence with only three expulsions and no suspensions greater than 10 days (Cornell et al., 2004). A study of threat assessment in 209 cases in Memphis City Schools found that just five students were expelled without placement in an alternative setting (Strong & Cornell, in press).

Conclusions

During the 1990s, many schools systems implemented zero tolerance policies and instituted a variety of safety and security procedures in response to fears of student violence. At the same time, student expulsions increased dramatically and there were many cases of students being removed from school for seemingly minor transgressions (Skiba & Rausch, 2006). The U.S. Department of Education, in conjunction with the Secret Service, recommended that schools adopt a threat assessment approach that focuses on prevention rather than security, and discouraged efforts to identify allegedly dangerous students through profiling (Vossekuil et al., 2002). The present study found positive effects of a staff training program using the *Guidelines for Responding to Student Threats of Violence* (Cornell & Sheras, 2006), which was designed to allay fears of violence and persuade staff to adopt a prevention-oriented, threat assessment approach to student threats of violence. Future research should be aimed at demonstrating the long-term impact of this training on the response of school personnel to student threat incidents.

Notes on contributors

Korrie Allen, PsyD, is an assistant professor of Pediatrics in the Division of Community Health and Research at Eastern Virginia Medical School. Dr. Allen is extensively involved in school-based research and intervention projects. Her recent studies have focused on violence and alcohol prevention, anger management and social skills training, character education, and emergency response/crisis management.

Dewey Cornell, Ph.D., is professor of education and a clinical psychologist in the Programs in Clinical and School Psychology in the Curry School of Education, University of Virginia. He is director of the Virginia Youth Violence Project and conducts research on school safety and youth violence prevention.

Edward Lorek, M.S., is a Research Associate I in the Division of Community Health and Research at Eastern Virginia Medical School in Norfolk, Virginia. Mr. Lorek received his M.S. from Villanova University in General/Experimental Psychology.

Peter Sheras, Ph.D., is professor of education and a clinical psychologist in the Programs in Clinical and School Psychology in the Curry School of Education, University of Virginia. He is specialized in adolescent relationships, family relationships, and stress. He works closely with Dr. Cornell on the Virginia Youth Violence projects.

References

- Arcia, E. (2006). Achievement and enrollment status of suspended students: Outcomes in a large, multicultural school district. *Education and Urban Society*, 38, 359–369.
- Bowen, N., Bowen, G., & Ware, W. (2002). Neighborhood social disorganization, families, and the educational behavior of adolescents. *Journal of Adolescent Research*, 17, 468–489.
- CNN. (2002). *Mourning for victims of German school rampage*. Retrieved April 11, 2008, from <http://archives.cnn.com/2002/WORLD/europe/04/26/germany.shooting/>
- CNN. (2007). *Teen dead who opened fire on Finnish classmates, police say*. Retrieved April 11, 2008, from <http://www.cnn.com/2007/WORLD/europe/11/07/school.shooting/index.html>
- Cornell, D. (2003). Guidelines for responding to student threats of violence. *Journal of Educational Administration*, 41, 705–719.
- Cornell, D. (2006). *School violence: Fears versus facts*. Mahwah, NJ: Lawrence Erlbaum.
- Cornell, D., & Sheras, P. (2006). *Guidelines for responding to student threats of violence*. Longmont, CO: Sopris West.
- Cornell, D., Sheras, P., Kaplan, S., McConville, D., Douglass, J., Elkon, A., et al. (2004). Guidelines for student threat assessment: Field-test findings. *School Psychology Review*, 33, 527–546.
- Creemers, B.P.M. (2002). From school effectiveness and school improvement to effective school improvement: Background, theoretical analysis, and outline of the empirical study. *Educational Research and Evaluation*, 8, 343–362.
- DeVoe, J.F., Peter, K., Noonan, M., Snyder, T.D., & Baum, K. (2005). *Indicators of school crime and safety: 2005* (NCES 2006-001/NCJ 210697). U.S. Departments of Education and Justice. Washington, DC: U.S. Government Printing Office.
- Fein, R.A., Vossekuil, F., & Holden, G.A. (1995). Threat assessment: An approach to prevent targeted violence. *National Institute of Justice: Research in Action*, 1–7 (NCJ 155000). Retrieved August 2, 2004, from <http://www.secretservice.gov/ntac.htm>.
- Fein, R., Vossekuil, B., Pollack, W., Borum, R., Modzeleski, W., & Reddy, M. (2002). *Threat assessment in schools: A guide to managing threatening situations and to creating safe school climates*. Washington, DC: U.S. Secret Service and Department of Education.
- Flaherty, L.T. (2001). School violence and the school environment. In M. Shaffii & S.L. Shaffii (Eds.), *School violence assessment, management, prevention* (pp. 25–51). Washington, DC: American Psychiatric Publishing.
- Graham, S., Bellmore, A., & Mize, J. (2006). Peer victimization, aggression, and their co-occurrence in middle school: Pathways to adjustment problems. *Journal of Abnormal Child Psychology*, 34, 363–378.
- Grodsky, E., & Gamoran, A. (2003). The relationship between professional development and professional community in American schools. *School effectiveness and school improvement*, 14, 1–29.
- Heaviside, S., Rowand, C., & Farris, E. (1998). *Violence and discipline problems in U.S. public schools: 1996–1997*. (NCES 98-030). Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- Hill, D. (1998). Reform school. *Teacher Magazine*, 9, 34.
- Juvonen, J., Nishina, A., & Graham, S. (2000). Peer harassment, psychological functioning and school functioning in adolescents. *Journal of Educational Psychology*, 92, 349–359.
- Kostinsky, S., Bixler, E.O., & Kettl, P.A. (2001). Threats of school violence in Pennsylvania after media coverage of the Columbine High School massacre. *Archives of Pediatric Adolescent Medicine*, 155, 994–1001.
- Levin, B. (2003). *Better education: The role of the Canadian governments*. Whitworth Research Award presentation to the Canadian Education Association. Toronto, Canada: Canadian Centre for Policy Alternatives.
- Levin, B. (2006). Schools in challenging circumstances: A reflection on what we know and what we need to know. *School effectiveness and school improvement*, 17, 399–407.

- Ma, X. (2002). Bullying in middle school: Individual and school characteristics of victims and offenders. *School Effectiveness and School Improvement*, 13, 63–89.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Oxford, UK: Blackwell.
- Osher, D., Dwyer, K., & Jackson, S. (2004). *Safe, supportive and successful schools: Step by step*. Longmont, CO: Sopris West.
- O'Toole, M.E. (2000). *The school shooter: A threat assessment perspective*. Quantico, VA: National Center for the Analysis of Violent Crime, Federal Bureau of Investigation.
- Roland, E. (2000). Bullying in school: Three national innovations in Norwegian schools in 15 years. *Aggressive Behavior*, 26, 135–143.
- Roland, E., & Galloway, D. (2004). Professional cultures in schools with high and low rates of bullying. *School Effectiveness and School Improvement*, 15, 241–260.
- Schuiteman, J.G. (2007). *The status of Virginia SROs: 2007*. Retrieved July 17, 2007, from <http://www.dcjs.virginia.gov/vcss/sro.cfm?menuLevel=5&mID=3>
- Singer, M., & Flannery, D. (2000). The relationship between children's threats of violence and violent behaviors. *Archives of Pediatric and Adolescent Medicine*, 154, 785–790.
- Skiba, R., & Rausch, M.K. (2006). School disciplinary systems: Alternatives to suspension and expulsion. *Children's needs III: Development, Prevention, and Intervention*, 1, 87–102.
- Skiba, R.J., & Peterson, R. (1999). The dark side of zero-tolerance: Can punishment lead to safe schools? *Phi Delta Kappan*, 80(5), 372–382.
- Smith, J.D., Schneider, B.H., Smith, P.K., & Ananiadou, K. (2004). The effectiveness of whole-school antibullying programs: A synthesis of evaluation research. *School Psychology Review*, 33, 547–560.
- Streiner, D.L. (2003). Being inconsistent about consistency: When coefficient Alpha does and doesn't matter. *Journal of Personality Assessment*, 80, 217–222.
- Strong, K., & Cornell, D. (in press). Student threat assessment in Memphis City Schools: A descriptive report. *Behavioral Disorders*.
- U.S. Department of Education, National Center for Education Statistics. (2004). *Indicators of school crime and safety*. Retrieved April 2, 2004, from <http://www.nces.ed.gov/>
- U.S. Department of Education, Office of Safe and Drug-Free Schools. (2007). *Report on the implementation of the Gun-Free Schools Act in the States and outlying areas, school year 2003–04*. Washington, DC: Author.
- Virginia Department of Education (2007). *Annual report of discipline, crime, and violence, school year 2005–2006*. Richmond, VA: Author. Retrieved July 19, 2007, from <http://www.pen.k12.va.us/VDOE/Publications/>
- Virginia Youth Violence Project. (2008). *Guidelines for responding to student threats of violence: Reviewer comments*. Retrieved April 16, 2008, from <http://youthviolence.edschool.virginia.edu/reviews.html>
- Vossekuil, B., Fein, R.A., Reddy, M., Borum, R., & Modzeleski, W. (2002). *The final report and findings of the Safe School Initiative: Implications for the prevention of school attacks in the United States*. Washington, DC: U.S. Secret Service and U.S. Department of Education.