A Framework for School Safety and Risk Management: Results From a Study of 18 Targeted School Shooters

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A Framework for School Safety and Risk Management: Results From a Study of 18 Targeted School Shooters

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Abstract
Targeted violence continues to pose a threat to school safety. Reported here are the results of a study of 18 cases of school shooters from 1996 to 2012. Variables examined are individual factors and behaviors, family dynamics, and triggering events. Results indicate the need for expanded school-based mental health services, threat assessment, and prevention programming to meet the needs of students at risk of violence. Recommendations for implementing services are included.

Key words: Crisis management, mental health services, risk management, safe schools, school safety, school shootings, targeted violence, threat assessment, violent behavior.

Multiple-victim school shootings continue to be an intractable problem in American schools. In the wake of these infrequent but highly publicized events, school administrators, law enforcement professionals, mental health counselors, and policy makers have...
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come under pressure to take steps to provide resources and solutions to address the issue. Two decades after the Columbine tragedy that took the lives of 12 students, a teacher, and the two teen killers in 1999, the nation realizes that no school is exempt from the possibility of violence.

The pace of school shootings has increased. In the United States, the Federal Bureau of Investigation (FBI) identified 160 active shooter incidents between 2000 and 2013. Pre-Kindergarten through 12th grade school settings were the location of 39 of these incidents, resulting in 117 killed and 120 wounded (Blair & Schweit, 2014). The number of school shootings is on the rise, with the average annual number of incidents in the first half of the study being 6.4 per year, increasing to 16.4 shootings by the time of the last half of the study (Blair & Schweit, 2014).

The Department of Education reports the number of associated deaths in American elementary and secondary schools climbed from a low of 13 deaths in the 1999–2000 school year to a high of 45 deaths in 2011–2012 (Morgan, Musu-Gillette, Robers, & Zhang, 2015). Of those 45 violent deaths occurring between July 1, 2011, and June 30, 2012, there were 26 homicides, 14 suicides, and 5 deaths (Morgan et al., 2015).

Violent incidents at schools during this period include a 2001 shooting by a 15-year-old California student at Santana High School resulting in two students killed and 13 injured as well as a 2005 school shooting on the Minnesota Red Lakes Indian Reservation by a 16-year-old student that resulted in seven deaths before the shooter killed himself. In 2007, a new phenomenon appeared: attacks by adult perpetrators. In a Pennsylvania Amish schoolhouse shooting, the attack was planned and carried out by an adult. The advent of adult killers in school shootings expands the arena of violence in school; shooters in the past had been exclusively students enrolled in the school.

Two deadly and high-profile school shootings occurred in 2007 and 2012. On April 16, 2007, exactly 8 years after the Columbine attack, a Virginia Tech University undergraduate, Cho Seung-Hui, shot and killed 32 students and teachers and wounded another 29 before taking his own life. On December 14, 2012, the shooting rampage at the Sandy Hook Elementary School in Newton, Connecticut, resulted in 20 child homicides, six adult homicides, and the adult suicide of the shooter himself. Authorities have described the Sandy Hook shooting as the deadliest in U.S. history (Blair & Schwedt, 2014). This mass murder brought the critical and controversial issue of gun control to the forefront of the American media, and it also zeroed in on the issue of too few mental health services in school settings.

In light of these continued trends of violence in public places, and in particular mass murders with multiple victims in school settings and the increased need for mental health services, the present study focused on school attacks, a particular type of violence known as targeted school violence.

Targeted violence is a term developed by the U.S. Secret Service to refer to any violent incident where a known or knowable attacker selects a particular target prior
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to a violent attack, where the victim or target is a classmate, teacher, or school building (Vossekuil, Fein, Reddy, Borum, & Modzeleski, 2002). The FBI and the Secret Service originally created this term as part of their investigations into the behavior of assassins.

Unfortunately, despite federal mandates to improve all student achievement and to increase services for students at risk of academic failure, school-based mental health services and resources with a framework for threat assessment and prevention are noticeably absent from school reform initiatives (Rossen & Cowan, 2014; Vanderbleek, 2004). True, awareness of the severity and complexity of the problem has increased and school officials have become more proactive in appropriating funding and adopting policies and procedures to mitigate violence. However, resources necessary for adequate services are still insufficient and the incidents of school violence continue unabated.

The recent trend of more frequent shootings underscores the need for more intensive specialized mental health screening of troubled students in school-based programs (Rossen & Cowan, 2014). More than 20% of students at some point experience a serious mental health disorder (Merikangas et al., 2010). This number does not include students struggling with problems that do not warrant an official diagnosis. A reasonable estimate is about 10 million students in need of professional help in K–12 public schools nationwide (National Center for Educational Statistics, 2017).

Two researchers who examined specific school shooters documented the presence of mental health issues in school shootings and found actual diagnoses in a number of cases. Langman (2009) studied 10 rampage school shooters; based on available information, these youths were categorized into three types of mental disorders: traumatized, psychotic, and psychopathic. Newman (2004), in a case study of two school shooters, found similar results. The widely published essay “I am Adam Lanza’s Mother” documented the personal ongoing struggles and heartache of parents of children with disabilities in a society offering limited services and health insurance coverage that ranges from meager to nonexistent (Long, 2012).

Currently, in addition to the increase in the general public’s and the public schools’ awareness of the problem, a number of researchers have focused on the need for school-based mental health services. Voices of various constituencies from the field acknowledge the need for prevention and mental health services beyond the general evaluation level. Support personnel, from a number of related disciplines including professional school counselors, school psychologists, social workers, and nursing personnel, have struggled with the actual delivery of school-based clinical services. Studies have concluded that there is a strong need for effective prevention and intervention programs and more comprehensive threat assessment in schools (Astor, Meyer, Benbenishty, Marachi, & Rosemond, 2005; Cornell et al., 2004; Daniels et al., 2010).

Furthermore, a proactive support movement has emerged from leading education and human health professional organizations. The National Association of Secondary
School Principals (NASSP), in collaboration with five other educational organizations, released a position paper entitled “A Framework for Safe and Successful Schools” with a joint recommendation for improved school safety and access to mental health services for students. This document, dated April 4, 2013, was distributed to the president and Congress (Cowan, Vaillancourt, Rossen, & Pollitt, 2013).

As needs have become more severe and violent trends in schools have continued and escalated, the need for services has become more critical than ever before. School leaders, counseling professionals, and policy makers are asked to focus attention and resources on monitoring incidents of school violence and implementing assessment services. These are to be made available to the general population. For students with mental health issues, these services could lead to a reduction in targeted violence incidents and have the potential to create safer and more effective schools.

In view of the current trends in rampage shootings and the lack of mental health services, targeted violence is the focus of the current study. The number of incidents of targeted school shootings has increased every decade since the 1960s. According to a joint report from the U.S. Secret Service and the Department of Education, there were four incidents of targeted school shootings in the 1970s, five in the 1980s, 28 in the 1990s, and 25 in the first decade of the 2000s (Warnick, Johnson, & Rocha, 2010). The number of incidents of targeted violence that resulted in multiple deaths rose from one incident per year between 1992 and 1995, to an average of five incidents per year from 1995 to 2005 (Blum, 2005). Yet there is limited research that examines the trend in targeted school violence.

In response to the highly publicized Columbine massacre, a few studies and guides have been produced in the area of threat-assessment and have served as a foundation for the current study (Reddy et al., 2001). The first of the guidelines, entitled “Early Warning, Timely Response: A Guide to Safe Schools,” was produced by the U.S. Department of Education (Dwyer, Osher, & Warger, 1998). It included a brief summary of research on violence in schools and guides for prevention, intervention, and crisis response system services. The FBI produced a special report entitled “The School Shooter: A Threat Assessment Perspective” (O’Toole, 2000). This study provided a framework for the evaluation of violent incidents in schools.

The current study builds on a previous study of 15 cases of targeted school shooters that occurred from 1996 to 2005. The prior study focused exclusively on environmental school-related variables. The three areas included school culture, peer/social dynamics, and disclosure of intentions (Lenhardt, Farrell, & Graham, 2010). However, due to the continued trends in rampage shootings and the need for more in-depth studies of contextual variables that act as contributing factors to violent acts, the primary purpose of the current study is to report the results of an analysis of 18 targeted school shooters from 1996 to 2012. Specifically, this article focuses on the contextual root variables of individual factors and behaviors, family factors, and triggering events. This analysis led us to framing recommendations for implementing services for schools and administrators to meet the needs of students at risk of violent behavior.
Methodology

Sample
The selected shooter sample consisted of 18 shooters in 16 separate incidents of targeted school violence, with two of the incidents involving two shooters. The targeted violence incidents selected for this investigation occurred at secondary schools in the United States between 1996 and 2012. All shootings that occurred during this period that met our criteria were included in the sample. While targeted violence incidents have been witnessed in schools both prior to and after this identified period, there were an inordinate number of these violent events during this 16-year period. The incidents selected for this study were premeditated, planned attacks on a school, not random and impulsive acts of violence. Because of the limitation of premeditation for an act of targeted violence in our study, many school shootings were eliminated. Those eliminated included shootings that were gang- or drug-related, incidents that resulted from disputes between specific individuals in which attacks were spontaneous and vengeful, and attempted school shootings that did not come to fruition because of some type of intervention. All 18 shooters researched as subjects for this study are Caucasian males.

Instrument
This investigation used a matrix instrument designed to record the interactions among identified risk factors that contribute to adolescent violence. The design of this instrument (see Tables 1–4) was initially based on some of the elements from the FBI’s Threat Assessment Model, which the agency developed to be used as a framework for determining a student’s level of motivation, means, and intent to carry out a proclaimed threat (O’Toole, 2000). This instrument was a four-pronged assessment approach that included root risk factors that influenced adolescent behavior, including individual personality, family dynamics, school factors, peer and social influences, events that may trigger violence, and the shooter’s disclosure of his intentions. This tool was based on a study of risk factors in shooters in American schools from 1974 to 1999 and was designed primarily to assist school and law enforcement personnel in assessing threat levels for various situations. The instrument employed for the current study is based on some of the features identified in the FBI study but is a more comprehensive model, expanded and designed to include more indicators with specific definitions designed for examining the degree of various risk factors that were present in shooter’s individual lives in targeted school shooting incidents occurring between 1996 and 2012.

The first set of variables evaluated individual factors and behaviors, including traits related to the potential for mental health problems ranging from poor coping skills and lack of resiliency to signs of depression, lack of empathy, and behavioral management problems. Risk behavior that appeared relevant to carrying out a threat included a history of problems ranging from behaviors involving law enforcement and/or school disciplinary actions to threats of violence and suicide attempts. Previous research has established that violence may be directly related to a pattern of personal traits and behaviors that minimize a perpetrator’s ability to handle stress and overcome adversarial situations. These traits or root causes include history and background in the lives of shooters and behavior that is relevant to carrying out a threat (Garbarino, 1999; Kirkman, 2008; Langman, 2009; Leary, Kowalski, Smith, & Phillips, 2003; O’Toole, 2000; Schaefer, Hays, & Steiner, 2007).
The focus of the second set of variables was family dynamics. The quality of the parent–child relationship and access to weapons were primary concerns in this area. Researchers have indicated that family dynamics is one of the most prominent psychosocial factors linked to school violence (Kidd & Meyer, 2002; Rak & Patterson, 1996; Vanderbleek, 2004; Vossekuil et al., 2002).

The third and final set of variables focused on triggering events, defined as a stressful event that served to trigger the perpetrator’s decision to carry out the violent act, such as suffering a loss or experiencing rejection prior to the shooting. This set of factors included a range of possible circumstances, from a simpler event such as an argument or a disciplinary action by a school official to a more consequential situation such as the end of a significant relationship or a rejection by a group. The U.S. Secret Service agency documented evidence of social rejection as a major factor in lethal school shootings (Vossekuil et al., 2002). Understanding the dynamics of triggering events is crucial to preventing future incidents of violence.

**Procedures**

The data collection system included collection of a minimum of 12 sources from each case. If this level of documentation was not available the case was disqualified. Minimally, files included enough information to complete coding on the matrix form and answer all questions completely. All shooters who met the criteria were included; eight shooters were ruled out due to a lack of available documentation.

A review of archival sources of the 18 cases provided data for the content analysis. Individual files for each shooter specifically relevant to the area of threat assessment were assembled, which included a review of primary sources, such as investigative and police reports; summaries of incidents; transcripts of governmental agency interviews with offenders; school, court, and mental health records including pre-sentence psychiatric reports and evaluations; and accounts from the shooters themselves, including journals, letters, poems, and songs. In several cases, media publications, such as magazine and newspaper articles that included crime scene photos and videos, were included in the individual files. In addition to these sources, supplemental telephone interviews with school personnel and administrators were conducted to elicit more demographic data. These individual files were used to review factors, patterns, and trends that preceded the school shooting.

To analyze the data compiled in the individual case files, two evaluators were selected. These evaluators held master’s degrees in counseling and each had a minimum of six years of clinical work in the counseling field. Three training sessions in the use of the coding instrument and the category system were conducted. Detailed instructions and examples were provided and the category definitions were explained. The scope and purpose of the study was discussed. During these sessions, sample materials were coded; afterward, disagreements were discussed as they occurred. Evaluators each received a copy of detailed instructions and coding examples to train them in procedures for evaluating each case. Following these training sessions, a pilot session was conducted on three of the cases to better clarify the coding process and ensure consistency in the coding method. After
independently coding these pilot cases, the two evaluators met to compare their results. Any discrepancies in the application of each indicator were discussed and clarified. As a result, six category definitions were revised due to ambiguity and two categories were eliminated.

The two evaluators, using the matrix instrument, independently conducted the content analysis of all 18 individual files. Following the independent evaluation of all cases the results were calculated and compared, using a formula for inter-coder reliability to calculate Scott’s pi, which resulted in a coefficient of .95, reflecting a strong agreement between the coders (Krippendorff & Bock, 2009; North, Holsti, Zaninovich, & Zinnes, 1963). Following the initial estimate of .95 reliability, the instances of disagreement were resolved through discussion with the third coder to produce consensus on all variables. A third party was involved in the analysis of the coding to achieve consensus and produce a single, mediated score for each of the areas of disagreement. The differences between the initial two evaluators were discussed, and a final mediated response was determined. This reconciled score was used in a total of five indicators, three from Table 1 (individual factors) and two from Table 2 (family dynamics).

Results

This study examined 22 indicators in three areas: individual factors and behaviors (15), family dynamics (4), and triggering events (3).

Individual Factors and Behaviors

Results from Table 1 indicate the number of similarities among shooters in terms of personality traits, temperament, and behavioral variables. An example would be a history of violent behaviors. We found that the higher the number of risk factors present, the greater the potential for violent acts. While the majority of adolescents struggle for social acceptance and with identity formation and accompanying feelings of vulnerability, not all adolescents respond with acts of violence (O’Toole, 2000). However, it is evident that there is a pattern of personal traits and behaviors for perpetrators of targeted violence, a pattern that minimized their ability to handle stress.

Two key indicators that garnered the highest ratings were lack of resiliency and poor coping skills. In 17 of the 18 cases (94%), the shooters had demonstrated a lack of resiliency or an inability to rebound from an unsatisfactory experience, hindrance, or insult. This lack of resiliency, coupled with poor coping skills in 15 of the 18 shooters (83%), proved to be a deadly combination.

Resiliency is defined as the power or ability to return to the original form or positive after being hurt. This ability to overcome risks and avoid negative outcomes provides a buffer in the wake of stressors and determines an individual’s ability to overcome adversarial situations and recover from illness and depression. Research on resilience documents the critical protective role of a secure, strong attachment and the importance of being loved unconditionally by a significant other (Garbarino, 1999). A combination of personal and environmental factors contributes to this sense of inner strength, self-confidence, and persistence.
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Shooters</th>
<th>Results</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>Poor coping skills</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Lack of resiliency</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Signs of depression</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Alienation/bullied</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Lack of empathy</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Exaggerated need for attention</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Anger management</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Behavior relevant to carrying out threat</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Psychiatric diagnosis prior to shooting</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>History of discipline problems at school</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>History of law enforcement problems</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>History of making threats of violence</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Previous threats/attempts at suicide</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Completed suicide following shooting</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Obsession with violent media</td>
<td>x</td>
<td>x</td>
<td>x</td>
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</tbody>
</table>
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A second area present in the majority of cases was alienation, being bullied, and a history of previous threats of violence by the shooters. Twelve of the 18 shooters (67%) felt alienated, had been bullied, or had issued a violent threat. A sense of alienation and a lack of belonging have been identified most consistently as significant contributing influences on school violence (Cotton, 1996; Edwards & Mullis, 2001). A lack of belonging can result in the student feeling insignificant and, therefore, seeking importance through negative actions. An additional stress contributor in society today is the increase in bullying, harassment, and marginalization, factors that contribute to a sense of alienation and persecution.

This influence in combination with poor coping mechanisms and lack of resiliency adds further stress and pressures on the shooters. A lack of bonding with significant others in perpetrators’ lives make it more probable that an individual may commit an act of violence such as a school shooting. A sense of meaninglessness, combined with terminal thinking, rests at the core of individuals who commit violent crimes.

School shooters who made threats before their violent acts are well documented. Kidd and Meyer (2002) studied eight perpetrators from 1996 and 1999, finding that seven of the eight shooters had made threats before committing their crimes.

Other Factors. A cluster of five significant indicators or risk factors was present in 61% of cases, or 11 of the 18 shooters. This group of variables included signs of depression, lack of empathy, poor anger management, intent to carry out threats, and a history of previous threats or attempted suicide. Lack of empathy was evident in reports of cruelty involving animal torture or killing. This pattern has been documented in a number of shooters’ cases (Schaefer et al., 2007).

Some of the subjects in this study displayed anger management problems (61%, or 11 of the 18) and demonstrated an exaggerated need for attention or respect (56%, or 10 out of 18). Another cluster of indicators, ranging from 33% to 50%, include disruptive behavior and a lack of respect for rules and authority. A history of law enforcement problems was present in 33% of the cases and a history of discipline problems in schools in 44%. Shooters in 50% of the violent incidents had an exaggerated need for attention. Also noteworthy in this grouping is that 44% had an obsession with violent media.

This group of variables—signs of depression, anger management issues, and previous threats of suicide, in addition to lack of empathy and behavior relevant to carrying out threats, suggests some of the shooters’ mental health issues were not addressed before their crimes. Although not all subjects with psychological issues will be perpetrators of violent acts, in the current study, 39% of shooters were found to have had a psychiatric diagnosis prior to their shooting event. The majority had not.

This finding is in keeping with those of a number of researchers who have documented perpetrators’ mental health problems before the shooting incidents (Borum, Fein, Vossekuiil, & Berglund, 1999; Kidd & Meyer, 2002; Kirkman, 2008; Langman, 2009; Leary et al., 2003; Newman, 2004; O’Toole, 2000). Newman (2004) notes that Michael Carneal was diagnosed with dysthymia and schizophrenia after the violent incident. Kipland Kinkel’s
defense attorney noted Kipland heard voices that had persisted since the time he was 12 years old. Other psychotic symptoms included delusions and hallucinations associated with schizophrenics. Garbarino (1999) suggests that a youth’s homicidal acts’ ultimate goal could be suicide. Our data indicate that the individuals displayed a pattern of behavior that reflected their sense of alienation, lack of resiliency, and an inability to cope. Their needs and behaviors formed patterns that were indicative of the acts that they carried out. They were, in some cases, socially isolated, often lacked a sense of connection or bonding with others, and also lacked effective coping mechanisms to deal with their life stressors.

**Family Dynamics**

Family dynamics is one of the most prominent psychosocial factors linked to school violence (Kidd & Meyer, 2002; Vossekui et al., 2002). The majority of perpetrators came from intact families; however, the families were deficient in emotional closeness and intimacy and in knowledge about their adolescent’s life.

Results identify two key factors in this area: turbulence in the parent–child relationship and the availability of guns. Our data indicate that family dynamics in a shooter’s life may have played a significant role in how he chose to act in response to his stressors. In the majority of the cases (72%, or 13 out of 18) the shooters had experienced a turbulent relationship with their parents or caregivers. In addition, 39% of the cases had documented evidence of a lack of parental support and a lack of parental supervision and discipline. Relationships with parents lacked a sense of intimacy and connectedness. While the difficulties in their family relationships may have been only the shooters’ perception of the relationship, family dynamics appeared to play a role in their actions.

For example, the shooters often expressed in their journals and communications that they did not feel that their parents were involved in their day-to-day lives. A number of perpetrators killed their parents before attacking their respective schools. One shooter described his relationship with his mother as “devoid of love and essentially nonexistent” (Woodham v. State, 2001). He killed his mother prior to carrying out his attack on the school by repeatedly stabbing her with a butcher knife (Woodham v. State, 2001). Another shooter shot both of his parents dead the night before the school attack; the next day he killed two students and wounded 25 others before he was disarmed (Barnard, 1999). Their rage toward their parents is suggestive of a lack of family affiliation or emotional attachment.

A lack of parental supervision was evidenced in some cases, and some shooters kept evidence of their intent to commit the crime within the home. Such evidence included violent media, detailed descriptions of their plans to carry out the shooting, multiple weapons, and bombs. These indicators went unnoticed or were not responded to by the parents.

Coupled with the issue of non-involved parenting and lack of supervision and discipline was the easy availability of firearms; 83% (15 out of 18) of the shooters had access to weapons within their homes. In a number of the cases weapons were obtained with the assistance and knowledge of adults, parents, or other family members within the home. Researchers point out access to firearms was a predictor in the majority of school shooting cases (Kidd & Meyer, 2002).
Table 2. Characteristics Associated With Targeted Violence: Family Dynamics

| Characteristics                                      | Shooters |         |         |         |         |         |         |         |         |         |         |         |         | Results | Percentage |
|------------------------------------------------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|-----------|
| Turbulent parent–child relationship                   | A        | B       | C       | D       | E       | F       | G       | H       | I       | J       | K       | L       | M       | 13       | 72        |
| Access to weapons                                     | x        | x       | x       |         |         | x       | x       | x       |         |         |         |         |         | 15       | 83        |
| Lack/perceived lack of parental support              | x        | x       |         |         | x       |         |         |         |         |         |         |         |         | 7        | 39        |
| Lack of parental supervision/discipline              | x        |         | x       |         |         | x       |         |         |         |         |         |         |         | 7        | 39        |
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Our data point to the environmental factors within the family that could play a pivotal role in how an individual chooses to respond to stressors. The family context has a major impact on adolescents’ social and emotional development and there is a strong link between dysfunctional family structure and child aggression. Researchers noted that shooters had little if any emotional support from their families (Vossekuil et al., 2002). Several authors support the theory that family involvement in their children’s emotional and behavioral problems is crucial to the success of their children (Vanderbleek, 2004). The family can be a place of belonging, a stabilizing unit of love and attachment where kids are anchored for success, or it can produce an environment devoid of attachment, one that can contribute to a child’s alienation and desperation. The capacity for resiliency is diminished when there is a high degree of uncertainty and emotional turmoil in the family (Rak & Patterson, 1996).

Triggering Events

Results in Table 3 indicate that perpetrators were highly susceptible to triggering events. Because of their difficulty coping with significant issues or personal failures, they tended to display low tolerance with frustration, poor coping skills, and little resiliency when faced with stressful situations. Triggering events arise from stressors that precede a threat the shooter makes or in the act of targeted violence itself. Examples of these stressors include a major life change or significant loss, an argument with a significant individual, or the end of a romantic relationship.

Significant loss or major rejection was noted in 61% (11 of the 18) of these cases. In addition, 33% (six in 18) were angered specifically by disciplinary action at school, and 17% (three in 18) shooters had experienced an argument with a significant other. Consequently, the shooter places blame for his unhappiness on others, demonstrates a lack of empathy for others, and exhibits an exaggerated sense of entitlement.

Violent episodes were initiated following some form of loss or some perceived failure; these losses frequently were the breaking point for adolescents who were already experiencing significant emotional distress from other rejections and failures (Kidd & Meyer, 2002, Vossekuil et al., 2002). Consistent with these findings are those obtained by the U.S. Secret Service and reported in their Safe School Initiative. The agency found evidence of social rejection in more than two-thirds of the cases reviewed (Vossekuil et al., 2002). Likewise, Leary et al. (2003), in a study of 15 school shooters from 1995 to 2001, found social rejection was a factor in the majority (12 of 15) of these lethal school shootings. Continual bullying and harassment mark a pattern of social rejection, but it is isolation that often serves as a triggering factor. Several shooters explained their attacks as a response to being mistreated. For example, the Pearl, Mississippi, shooter said that he killed because “People like me are mistreated every day. No one ever really cared about me” (Leary et al., 2003, p. 206). Similarly, one of the Jonesboro, Arkansas, shooters had vowed to kill all of the girls who had broken up with him (Leary et al., 2003). The demographic factors, school histories, social factors, and personalities of the attackers are varied, yet certain characteristics, behaviors, and responses to stressors were similar among our subjects.

Results from the current study further indicate a strong correlation between personal characteristics, contextual family factors, and triggering events. Note in Table 4 that the
Table 3. Characteristics Associated With Targeted Violence: Triggering Event

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Shooters</th>
<th>Results</th>
<th>Percentage</th>
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<tbody>
<tr>
<td></td>
<td>A  B  C  D  E  F  G  H  I  J  K  L  M  N  O  P  Q  R</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Significant loss or major rejection</td>
<td>x  x  x  x  x  x  x  x  x  x  x  x  x  x  x  x  x</td>
<td>11</td>
<td>61</td>
</tr>
<tr>
<td>Argument with significant other</td>
<td>x</td>
<td>x  x  x  x  x  x  x  x  x  x  x  x  x  x  x  x  x</td>
<td>3</td>
</tr>
<tr>
<td>Angered by disciplinary action at school</td>
<td>x</td>
<td>x  x  x  x  x  x  x  x  x  x  x  x  x  x  x  x  x</td>
<td>6</td>
</tr>
</tbody>
</table>
higher the number of risk indicators present in the shooter, the more severe the attack. Six shooters with the highest risk factors (ranging from 15 to 19 out of 22 indicators) were involved in high-profile incidents with high fatality rates. In addition, three of these shooters killed parents or guardians, and four committed suicide. Most of the attackers engaged in some signaling behavior prior to the incident. The shooters gave signs, yet in most cases no one was concerned to the degree that they sounded an alarm. The shooters remained undetected and underserved. For the majority of shooters, identified risk factors were not recognized, identified, or treated.

Discussion

Results from the current study provide comprehensive data on risk factors in 18 cases of targeted school shooters over a span of 16 years. The data confirm the fact that incidents of targeted school violence were usually pre-planned; personal traits and behaviors predisposed to violence were observable in the perpetrators. The roots of the violent school shootings are multiple, intricate, and intertwined (O’Toole, 2000). These violent acts were the result of a combination of multiple risk factors that served as detonators. The school shootings were the result of a culmination of long-standing identifiable problems, conflicts, disputes, and a persuasive sense of failure. Garbarino (1999) refers to these as accumulated social and environmental risk factors.

The limitations of the current study are important to consider when examining plans for further research. This study provided information on risk factors in three areas of the shooters’ lives. One limitation is the eight cases that were excluded because of insufficient data. It is possible that if they had been included, some results might be different. For future studies, one direction would be to examine the factors that tend to co-occur and determine which factors may be most responsive to prevention efforts. Another direction to expand the current study in a more comprehensive way would be to examine the nature of other ecological systems or contextual variables that affect shooter behaviors. Finally, the list of shooters could be expanded to include incidents from 2012–2017.

Recommendations

Results from this study have implications for administrators, policy makers, practicing professional counselors, and teachers working to address and preclude lethal school violence and serve the needs of at-risk youth. An important goal of school leaders today is to help school personnel and staff create safer and more secure school environments while continuing to meet higher academic standards, as outlined in the 2010 study of environmental variables in three areas: school culture, peer/social, and disclosure of intentions (Lenhardt et al., 2010). Professional counselors are more frequently asked to deal with students’ mental health issues in actual school settings. However, school districts generally do not have the financial resources to meet current challenges. Often there is a lack of policies, procedures, and uniform assessment tools to deal with violence issues.
To address this deficiency, a framework that considers the recommendations that follow needs to be developed and implemented. The current study highlights the need to develop a systematic violence prevention/intervention model to successfully identify and provide services to students of concern. Following are recommendations to accomplish this goal.

**Enhance Mental Health Services in Schools**

Results from case studies offer insights for understanding and identifying unmet needs of children potentially at risk for violent behavior. These case studies indicate that perpetrators’ personal traits and patterns of behavior minimized their ability to handle stress. The current study adds to that growing body of research and provides evidence that supports the need for comprehensive integrated school-based mental health programs. Professional counselors, social workers, and nurses should be trained in conjunction with teachers in identification of traits and patterns and in methods of delivery of mental health interventions for troubled students. Currently, school-based mental health services are lacking or often fragmented, marginalized, and/or underutilized despite the federal mandate to improve education for the whole student.

**Include Threat-Assessment Services**

Threat assessment needs to be an integral component of violence prevention programs. This service should include protocols and procedures for responding to and managing threats and other behaviors that endanger school safety. This resource should be available to enable identifying, monitoring, and treating youths at risk of violent behavior in the general population as well as youths who may be at risk specifically for targeted violence. A cautionary balance for safety and prevention procedures with respect for students who do not fit the profile needs to be taken.

Although there is no official model for threat assessment, experts in school crisis management, mental health, and public safety have identified common basic components of effective threat assessment procedures. These models can provide counselors with a conceptual framework for best-practice, school-based risk assessment. The Secret Service and the FBI have developed a framework of recommended procedures and protocol (dating from the late 1990s to the early 2000s) that provides professional counselors with a conceptual framework for best practice, school-based risk assessment (Borum et al., 1999; Dwyer et al., 1998; O’Toole, 2000; Verlinden, Hersen, & Thomas, 2000). In addition, several more recent resources are available that provide guidelines for conducting threat assessments based on a number of risk factors or warning signs that are associated with aggression and violence (Bernes & Bardick, 2007; Halikias, 2004).

**Promote Family Engagement in Services**

Our research reinforces the importance of family involvement in the services of youths at risk of violent behavior. Intervention strategies cannot be successful without family engagement. Perpetrators in the current study lacked healthy relationships with and support from their parents; the poor family dynamic contributed to their ongoing deviant behaviors and unresolved conflicts and with their inability to cope with stressful situations.
Research has pointed to family involvement as a key factor in school-based mental health services to improve student academic performance and emotional stability. Children have greater academic success when families are involved in the schools. Vanderbleek (2004) stresses the importance of family participation in reducing barriers for effective enrollment and in providing strategies for keeping children in school.

The current trend of escalation in violent school shootings is, unfortunately, a fact of life. In American society, schools serve as a primary agent of socialization; as such, they have an important role to play in addressing this deadly trend. Decades of research have laid the foundation for providing mental health services in schools, and more than a hundred educational and children’s mental health groups and experts have endorsed the 2013 recommendation provided to Congress by NASSP and five other organizations (Cowan et al., 2013). The current study provides evidence of root factors that, when left unattended, became precursors to violent school shootings.

This study adds to the body of research on school shootings and provides evidence for the need for action, serving as a wake-up call for the implementation of services to prevent Sandy Hook–style rampages. Enraged youths have become lethal killers as a result of residual stressors and unmet needs. We need to listen compassionately to the cries for help from desperate parents who face the ongoing struggle of dealing with high-needs adolescents but have no access to mental health services.

Creating a framework that balances a responsible set of policies and disciplinary structures with a focus on safety and addressing kids’ needs is the key. Integration of mental health services, delivered by school-based health professionals, into the structure of our nation’s schools is an important consideration for school reform. Certainly, by providing adequate services to both potential killers and at-risk children and by engaging families, professional counselors can identify concerning traits and behaviors in our young people.

Results from this study of 18 targeted shooters offer insights into how school officials can understand and address unmet needs of potentially violent at-risk adolescents, resulting in healthier youths and a de-escalation of violence. Young people who receive support services at a critical juncture in their lives can become more resilient and, as a result, achieve greater academic success and well-being.

References
A Framework for School Safety


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