School Shooters on College Campuses

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This study examined 16 perpetrators of multi-victim shootings at colleges and universities, comparing them using Langman's typology of psychopathic, psychotic, and traumatized shooters, and dividing them into targeted vs. random attackers. Targeted attackers were more frequently psychopathic than random attackers, with the latter being most commonly psychotic. Random attackers caused more casualties than the targeted attackers, and also had a higher rate of suicidality. Many perpetrators had family members who had served in the military and/or been involved in educational settings, many of the shooters experienced academic and/or professional failures, and most of the random attackers experienced failure in their pursuit of military careers. The targeted attackers left more warning signs of impending violence than the random attackers. The sample of college shooters was also compared to former college students who committed or planned multi-victim shootings in settings other than colleges or universities, with several similarities noted.

In the wake of a series of school shootings in the late 1990s, researchers began to study the perpetrators of these attacks. Much of this research focused on shooters who were secondary school students. The FBI's report on school shooters (O'Toole, 2000), as well as the joint report by the Secret Service and Department of Education (Vossekuil, Fein, Reddy, Borum, Modzeleski, 2002), dealt with secondary school students (and one primary school student). Similarly, studies by McGee and DeBernardo (2002), Verlinden, Hersen, and Thomas (2000), Meloy, Hempel, Mohandie, Shiva, and Gray (2001), and Leary, Kowalski, Smith, and Phillips (2003) concentrated on secondary school shooters. In my early work (Langman, 2009a, 2009b) I included only one college shooter among the ten perpetrators studied. In subsequent works (Langman, 2010a, 2010b, 2012, 2013) I analyzed several college shooters but did not consider them as an independent population apart from secondary school shooters.

This study seeks to provide information regarding patterns among college shooters in terms of their psychology, backgrounds, and pre-attack behavior. It also discusses former college students who committed rampage attacks at sites that had no connection to the colleges or universities they had attended.

METHOD

The population of college shooters was defined as people who committed multi-victim attacks with firearms at institutions of higher education. Though many people may assume that school shooters are students, this is not always the case. Because shootings have been committed by people with a variety of relationships to the campuses they attacked, this study examined a broad range of perpetrators. These included undergraduate and graduate students and former students, university employees, and people who had no current or past connection to the schools they attacked. Table 1 lists the shooters in chronological order of the dates of their attacks. This sample of college shooters includes those perpetrators for whom there was sufficient information available for a comparative analysis. The amount of available information varied across the shooters. Some had full-length biographies; others had news reports. Additional

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Table 1: College shooters

Date	Name, Age	College / University
1 August 1966	Charles Whitman, 25	University of Texas, Austin, TX
12 July 1976	Edward Allaway, 37	California State University, Fullerton, CA
6 December 1989	Marc Lépine, 25	Ecole Polytechnique, Montreal, Canada
1 November 1991	Gang Lu, 28	University of Iowa, Iowa City, IA
24 August 1992	Valery Fabrikant, 52	Concordia University, Montreal, Canada
14 December 1992	Wayne Lo, 18	Simon's Rock College, Great Barrington, MA
17 September 1996	Jillian Robbins, 19	Pennsylvania State University, University Park, PA
16 January 2002	Peter Odighizuwa, 43	Appalachian School of Law, Grundy, VA
29 October 2002	Robert Flores, 41	University of Arizona, Tucson, AZ
9 May 2003	Biswanath Halder, 62	Case Western Reserve University, Cleveland, OH
13 September 2006	Kimveer Gill, 25	Dawson College, Montreal, Canada
16 April 2007	Seung Hui Cho, 23	Virginia Tech, Blacksburg, VA
14 February 2008	Steven Kazmierczak, 27	Northern Illinois University, DeKalb, IL
23 September 2008	Matti Saari, 22	Seinajoki University, Kauhajoki, Finland
12 February 2010	Amy Bishop, 44	University of Alabama, Huntsville, AL
2 April 2012	One Goh, 43	Oikos University, Oakland, CA

sources included suicide notes, letters, webpages, online profiles, school assignments, institutional records, and manifestos.

Due to the number of shooters studied, I do not include biographies or summaries of their attacks. This information can be found online, in my previously mentioned works, or in Van Brunt (2012). For additional information, the website www.schoolshooters.info contains documents related to college shooters, including official reports, court reports, webpages, letters, and other materials.

The information was compared across shooters in order to detect common themes in their family backgrounds, personalities, personal histories, mental health statuses, and behavior leading up to their attacks.

The perpetrators were also compared to my typology of shooters (2009a, 2009b). My previous work identified three types of school shooters: psychopathic, psychotic, and traumatized. Psychopathic shooters are severely narcissistic; lack empathy; disregard social norms, rules, and laws; meet their needs at the expense of others; and often are sadistic. Millon and Davis (1998) identified subtypes within the psychopathy spectrum that are useful in understanding the personalities of the psychopathic shooters.

Psychotic shooters either had schizophrenia or schizotypal personality disorder. Their symptoms included hallucinations, delusions, disorganized thoughts and/or behavior, and significantly impaired social functioning. Traumatized shooters had histories of physical abuse, and in some cases, sexual abuse, too. At least one parent was absent and/or impaired, with problems such as alcoholism, drug abuse, and criminal histories. Due to the family dysfunction, there were often frequent relocations and changing caregivers as the children were moved from one home to another, and sometimes in and out of foster care. The family dysfunction often resulted in squalor and/or poverty. The confidence with which the perpetrators could be placed within the typology varied depending on the information available.

Another series of analyses compared two types of college attacks: those that were directed against specific individuals (targeted) vs. those that had no specific intended victims (random). Whereas secondary school attacks were typically either random or mixed (one specific victim and several random victims), the college attacks were generally highly targeted or completely random.

These, however, are not absolute categories. For example, Gang Lu killed his five intended victims, but also shot a secretary who happened to be between him and the administrator he was going after. Alternatively, Charles Whitman's campus attack was completely random, but he had specifically killed his mother and wife prior to going to campus. The one non-targeted victim in Lu's attack does not alter the fact that was carrying out revenge against the people he believed had wronged him. In Whitman's case, 46 out of 48 victims were random, and everyone shot on campus was a random victim.

Though some cases were less clear, all of them have been identified as either random or targeted, with the exception of One Goh. He reportedly intended to kill a particular administrator, but when he was unable to find her, gunned down random people. Perhaps he would have shot random victims even if he had found and killed the administrator, or perhaps killing his primary target would have ended his attack. Based on what is known, it appears that he intended at least a partially targeted attack, but committed a solely random attack. Because of the lack of clarity, Goh is not placed in either category.

RESULTS

Demographics of the Sample

The sample of 16 shooters included 14 males and 2 females (87.5% and 12.5%, respectively). The ages ranged from 18 to 62, with an average of 33.5. Nine of the shooters were 28 or under, and seven were 37 or older. Twelve attacks occurred in the United States, three in Canada, and one in Finland.

There was significant diversity among the perpetrators. Two had African heritage, with one student from Nigeria, and another with a father from Algeria. Six shooters were Asian American or Asian Canadian, and one was of Latino descent. Though it has been said that school shooters are typically white males, in this sample, only five out of sixteen were white males (31%).

Regarding their connections to the schools they attacked, six were undergraduate students (two traditional age and four nontraditional), four were graduate students or former students, three were employees (two professors and one custodian), and three were outsiders.

The Typology

Two significant findings emerged regarding college shooters and my typology. First, though traumatized shooters were the most common of the three types among secondary school perpetrators (Langman, in process), there were no college shooters who clearly fit the traumatized category. Three of them, however, appear to have experienced physical abuse, significant corporal punishment, and/or were likely to have witnessed domestic violence. Apart from having harsh fathers, these shooters did not have most of the features found among traumatized shooters, such as substance abusing parents, parents with criminal histories, frequently changing caregivers, and poverty. Based on the available evidence, these perpetrators were classified as either psychopathic or psychotic, but with a secondary categorization as having some features of traumatized school shooters.

Table 2: Typology and attacks

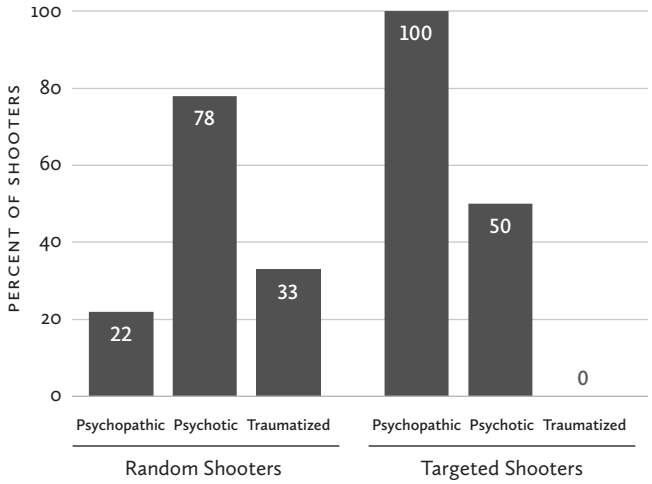
Shooter	Attack Type	Psychopathic	Psychotic	Traumatized
Charles Whitman	Random	**X**		**(X)**
Edward Allaway	Random		**X**	
Marc Lépine	Random		**X**	**(X)**
Wayne Lo	Random	**X**		**(X)**
Jillian Robbins	Random		**X**	
Kimveer Gill	Random		**X**	
Seung Hui Cho	Random		**X**	
Steven Kazmierczak	Random		**X**	
Matti Saari	Random		**X**	
One Goh	Ambiguous		**X**	
Gang Lu	Targeted	**X**		
Valery Fabrikant	Targeted	**X**		
Robert Flores	Targeted	**X**		
Peter Odighizuwa	Targeted	**X**	**X**	
Biswanath Halder	Targeted	**X**	**X**	
Amy Bishop	Targeted	**X**	**X**	

The fact that some perpetrators had features of more than one type leads to the second finding regarding the typology. Whereas virtually all the secondary school shooters fit one of the three types, several of the college shooters had features of two types.

Table 2 shows the intersection of the typology and type of attack. The three shooters who were either psychotic or psychopathic but with a possible secondary categorization as traumatized were all random attackers.

Overall, 69% of the shooters had psychotic features, 50% had psychopathic features, and 19% had some features of traumatized shooters. Among random attackers, 78% had psychotic symptoms, 22% had psychopathic traits, and 33% had some level of traumatized features. In contrast, 50% of targeted shooters had psychotic symptoms, 100% had psychopathic traits, and none of them were traumatized. This data is presented in Figure 1.

Figure 1: Psychological Types of Random vs. Targeted Shooters

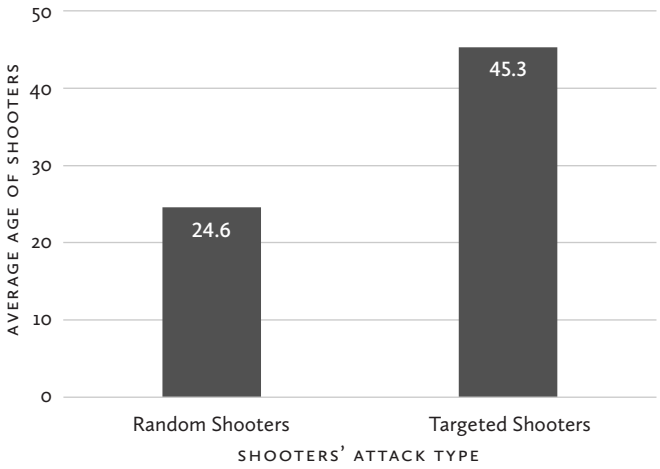


The intersection of the typology and the type of attack reveals that the targeted attackers always had psychopathic traits. In contrast, the random attackers rarely had psychopathic features, and when they did, they also had some aspect of traumatized shooters. Primarily, however, the random attackers were psychotic.

RANDOM VS. TARGETED ATTACKERS

There are other notable differences between the random vs. the targeted attackers. The targeted shooters were close to twice the age of the random perpetrators (45.3 vs. 24.6, respectively). Apart from the one outlier of Edward Allaway, a 37-year-old random shooter, all random shooters were 27 and under and all targeted shooters were 28 and older.

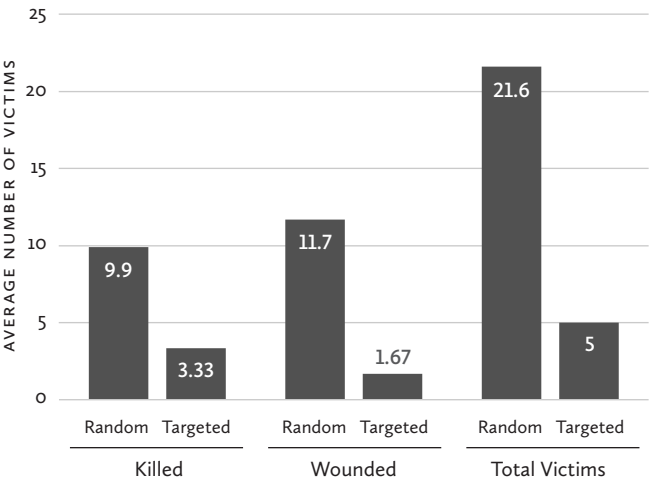
Figure 2: Average Age of Random vs. Targeted Shooters



The random attackers were far more dangerous, causing over four times the number of casualties of the targeted attackers (see Figure 3). This number could have been much higher if not for fortuitous circumstances during two of the random attacks. Wayne Lo's gun kept jamming, causing him to eventually give up the attack, and Jillian Robbins was tackled after just getting off a few shots.

Interestingly, the targeted shooters killed twice as many people as they wounded (3.33 vs. 1.67), whereas the random shooters killed fewer people than they wounded (9.9 vs. 11.7). This may reflect the targeted attackers' determination to kill the people they believed had wronged them. Among the random shooters, however, there was dramatic variation in the ratio of killed vs. wounded. For example, Cho and Saari killed far more than they wounded, whereas Whitman and Gill wounded far more than they killed. This may be a result of the method of attack. Cho and Saari killed people in classrooms at very close range. Whitman shot from a great distance (the Texas Tower), and Gill shot in an open space on campus, not an enclosed classroom.

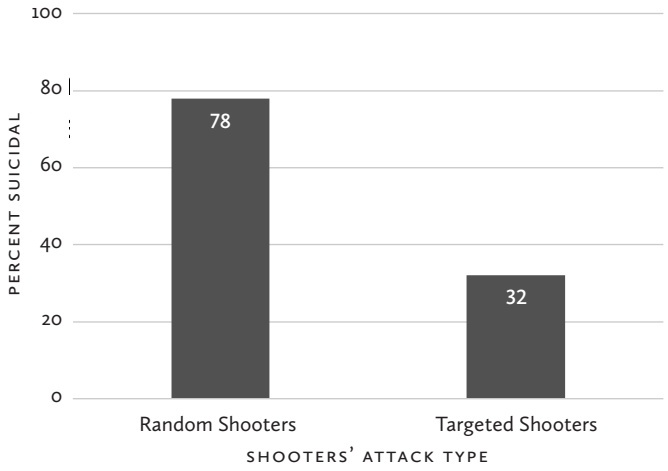
Figure 3: Average Number of Victims by Type of Attack



The rates of suicidality differed among the random vs. targeted shooters. The rate for the random shooters is not simply a matter of how many killed themselves, but how many intended to die in their attacks. Charles Whitman, for example, did not kill himself, but committed "suicide by cop." The notes he left at his home clearly indicated that he was going to die in the attack. Jillian Robbins also intended to die in her attack, but was tackled and apprehended before she had a chance to kill herself or be killed by law enforcement. Both of these shooters were counted as suicidal.

The rate of suicidality among random shooters was more than twice that of targeted shooters. Perhaps this difference in suicidality was because the targeted shooters blamed their problems on their victims and sought what they thought was justice, whereas the random shooters were more aware that the source of their pain existed within themselves and sought to end their lives in a violent outburst.

Figure 4: Suicidality in Random vs. Targeted Shooters



Psychopathy and Type of Attack

The subtypes of psychopathy identified by Millon and Davis (1998) are useful in differentiating among the perpetrators. Determining which subtypes best fit the shooters was a subjective process based on the available information. Nonetheless, a consideration of the subtypes can shed further light on the dynamics of the shooters.

Though psychopaths can be glib and charming, none of the targeted shooters had these traits. In fact, all six had features of what Millon and Davis called the abrasive psychopath: "Abrasive psychopaths have incessant discords with others, magnifying every minor friction into repeated and bitter struggles" (p. 167). The following adjectives describe this personality: "contentious, intransigent, fractious, irritable, caustic, debasing, quarrelsome, acrimonious, and corrosive" (p. 167).

A notable feature of this subtype is the tendency to claim the high moral ground for their actions. This was seen most strongly in Gang Lu, Valery Fabrikant, and Robert Flores, all of whom believed they were making the world a better place by killing people who in their minds had denied them justice.

In addition to their abrasive traits, several (if not all) of the targeted shooters exhibited features of the explosive psychopath. Explosive psychopaths "are hypersensitive to feelings of betrayal or may be deeply frustrated by the futility and hopelessness of their lives" (Millon and Davis, 1998, p. 166). For explosive psychopaths, specific people often symbolize "the sense of frustration and hopelessness that sparks their explosive reactions … these symbolic figures must be obliterated" (p. 166). Though their attacks might appear to be vengeful, "impotence and personal failure" (p. 167) are the driving forces in their violence. Thus, Amy Bishop lashed out against the members of her department in the wake of her denial of tenure in an attempt to "obliterate" the people who symbolized her failure. This apparently was not simply revenge because she also shot people who supported her bid for tenure.

There were two random attackers with psychopathic personalities: Charles Whitman and Wayne Lo. Unlike the targeted shooters, neither Whitman nor Lo was chronically belligerent or abrasive. These two shooters were skilled in impression management, able to hide their psychopathic traits behind a pleasant, deceptive façade.

Charles Whitman was a complex character. Though an autopsy revealed that Whitman had a brain tumor, the consensus of experts has been that the tumor did not account for his attack (Lavergne, 1997). Whitman demonstrated traits of both the disingenuous and the explosive psychopath. The disingenuous subtype is skilled in deception and able to make "a superficially good impression upon acquaintances" (Millon and Davis, 1998, p. 163). As noted by his biographer, "Charlie had become a consummate actor. He could be a serious student, a contrite poacher, a daredevil, or a model marine" (Lavergne, 1997, p. 21). In reality, however, "the air of superficial affability is extremely precarious" and when it crumbles, "there may be momentary upsurges of abuse and rage" (Millon and Davis, 1998, p. 163).

As is typical for explosive psychopaths, Whitman's attack appears to have been driven by "impotence and personal failure." In addition, he may have killed his wife – and perhaps his mother, too – because they represented all his failed aspirations. They knew what he had striven to accomplish and knew where he fell short. Also, his wife was successful in her education and her career. He was successful in neither and was financially dependent on her. In addition, though he despised his father for being a wife-beater, Whitman himself was a wife-beater. Thus, his wife may have symbolized his failures as breadwinner and as husband. With explosive psychopaths, "symbols of futility and hopelessness must be removed from the scene" (Millon and Davis, 1998, p. 167).

Lo is perhaps best characterized as an unprincipled psychopath. These psychopaths "are skillful in the ways of social influence, are capable of feigning an air of justified innocence, and are adept in deceiving others with charm and glibness" (Millon and Davis, 1998, p. 162). They enjoy the challenge of

manipulating and deceiving people. The night before his attack, Lo told a friend that he was copying out the book of Revelations so that people would think he was crazy. After his attack, he was observed enjoying his notoriety and was heard to ask "if there was any way to fool … the shrink" (*Commonwealth vs. Wayne Lo, 1998*). Seven years later a reporter for The New York Times interviewed Lo in prison and noted: "Wayne Lo often spoke with disarming frankness. He was also manipulative, controlling and so eager to portray himself in a positive light that it was sometimes impossible to believe he thought he was telling the truth" (Glaberson, 2000).

Whereas the psychopathic targeted shooters were markedly belligerent and abrasive, the two psychopathic random shooters were both adept at impression management, effectively hiding their violent urges when they needed to. Thus, their attacks were harder to anticipate.

The Significance of Education and the Military

Because school shootings by definition involve the use of firearms in educational settings, an analysis was conducted regarding the place of education and professions that involve firearms (primarily the military, but also law enforcement) in the lives of the shooters. Interestingly, at least 44% of the shooters had family members in the military or law enforcement, and at least 44% had family members involved in education, either as teachers/professors or other positions within educational settings (I say *at least* because it has not been possible to track down the information for all perpetrators; thus, the numbers might be higher). The significance of these facts may vary across shooters depending on which family members held what positions.

The prevalence of relatives in the military and education may be particularly significant in relation to the shooters' own failures in these two domains. For example, at least seven shooters (44%) experienced military rejections or failures. They either failed in their attempts to join the military, were accepted and then quickly released, had their parents pull strings to get out early, or received a dishonorable discharge. These failures may have been significant blows to their identities, particularly for those who had parents or other relatives who served successfully. All of the shooters who experienced military failures were random attackers. In fact, nearly all the random attackers had some type of military failure (7 out of 9, or 78%). An eighth shooter (Wayne Lo) may have had military aspirations that he did not pursue; he reportedly was obsessed with the Marines and had "USMC" (United States Marine Corps) shaved on his head.

Similarly, 63% of the shooters experienced some kind of academic failure. These included failing to graduate from high school, being forced out of college classes, failing classes, failing to get a college degree, or failing to win an intensely desired academic award. Again, these failures may have been major contributory factors in the shooters' violence, particularly for those with parents or other family members involved in education.

For example, Jillian Robbins attacked random people at Penn State, a university she had never attended. Her father was an Army administrator and Robbins had joined the Army Reserves but was eventually rejected for failing to graduate from high school. Her mother received a graduate degree at the main campus of Penn State, was then employed there, and subsequently relocated to a different Penn State campus. In addition, Robbins' stepfather was a professor. Perhaps Robbins' failure to succeed in either domain where her parents had successful careers was particularly distressing.

Similarly, Kimveer Gill attacked students at Dawson College, a school he had no connection to. Like Robbins, Gill had family members in the military and higher education, with his father having been a professor. Gill joined the Canadian Army but lasted just a few weeks. He also enrolled in college but lasted only a semester. Like Robbins, he failed in two domains where others in his family had succeeded.

Marriage, Romance, and Children

A review of the shooters' own marriages and families yielded several findings. Among the random shooters, 0% (0 out of 9) had children, whereas 67% (4 out of 6) of the targeted shooters had children. Both random and targeted shooters had significant marital problems. Robert Flores and Peter Odighizuwa both assaulted their wives, and both wives left them and took their children. Charles Whitman also beat his wife; they had discussed separation and divorce and at one point Whitman had decided to leave his wife but then changed his mind. Edward Allaway's second wife left him several weeks before his attack (his first wife had divorced him). Jillian Robbins separated from her husband; she found a new boyfriend, had a big fight with him, and went on her rampage the next day. Of the seven married shooters, only two appear to have had intact marriages (Fabrikant and Bishop).

The nine non-married shooters generally had significant problems with establishing and/or maintaining romantic/sexual relationships. Several adult shooters, such as Gang Lu, Biswanath Halder, Seung Hui Cho, and One Goh, appear to have been socially isolated, with no known friends, significant others, or dating relationships.

Role Models and Ideologies

Several college shooters were drawn to ideologies of power and/or role models for violence. For example, Marc Lépine, Kimveer Gill, and Steven Kazmierczak were all fascinated by Hitler and the Nazis. In addition, Seung Hui Cho, Matti Saari, Gill, and Kazmierczak admired Eric Harris and Dylan Klebold. Kazmierczak also had other influences, including Seung Hui Cho, Satanism, and serial killers such as Ted Bundy and Jeffrey Dahmer. Lépine found a role model in Canadian killer Denis Lortie and justified his rampage, which was directed against women, with an ideology of misogyny. Cho also developed an

Table 3: Random attackers, prior to their attacks

Name	Faced financial crisis	Abrasive behavior with staff	Grievance campaign	Sued (or threatened to sue)	Sought external publicity	Violent threats	Students / staff afraid
Whitman							
Allaway							
Lo						X	X
Cho							X
Kazmierczak							
Saari							

ideology justifying his attack as defending the innocent and helpless in which he compared himself to Moses and Jesus. Saari, in addition to having Harris and Klebold as role models, also emulated Pekka-Eric Auvinen, a school shooter in Finland.

Though Charles Whitman left no record of role models, his biographer (Lavergne, 1997) hypothesized that he may have been influenced by the killers portrayed in the book *In Cold Blood,* and the mass murder by Richard Speck, which was called the "crime of the century" and occurred just over two weeks before Whitman's attack.

All of these shooters were random attackers. None of the shooters who engaged in targeted attacks had comparable influences. The targeted shooters responded to specific real-life conflicts; the random shooters were influenced by – or sought justification in – role models and ideologies for attacks against people they did not even know.

Build-up to the Attacks

Perhaps the most dramatic differences between random and targeted perpetrators occurred in their life situations and behaviors leading up to their attack. These differences are highlighted in Tables 3 and 4.

All of the targeted attackers faced significant financial stress. Lu was unemployed and had failed to obtain an academic position despite sending out hundreds of letters. Odighizuwa and Flores failed in their programs and had to repay student loans that they could not afford. Halder was very poor, eking out a meager existence. Fabrikant was in danger of losing his professorship, and Bishop had been denied tenure, which meant her academic career might have been soon over. Also, as noted, four of the six targeted attackers had children, increasing the significance of their financial worries. In comparison, the random attackers had jobs or were supported by their families (parents or wife) and none of them had children.

Also, One Goh, who attacked Oikos University, had a long history of overwhelming financial difficulties, including tens of thousands of dollars in debts and liens. The primary triggering event of his rampage appears to have been his rage over not getting his full tuition refunded after he had dropped out the previous semester.

The behavior of the targeted shooters was notable for be-

Table 4: Targeted attackers, prior to their attacks

Name	Faced financial crisis	Abrasive behavior with staff	Grievance campaign	Sued (or threatened to sue)	Sought external publicity	Violent threats	Students / staff afraid
Lu	X	X	X	(X)	X		
Fabrikant	X	X	X	X	X	X	X
Odighizuwa	X	X	X	X[a]		X	X
Flores	X	X	X			X	X
Halder	X	X	X	X[b]	X	X	X
Bishop	X	X	X	X		X	X

a Odighizuwa had sued a previous employer (not Appalachian Law School).

b Besdies a lawsuit at Case Western Reserve University, Halder also had sued past employers or potential employers.

ing arrogant, demanding, abrasive, and belligerent. They all had ongoing grievances with their institutions that lasted for months, and in some cases, years. They all went beyond the proper channels in pursuing resolution to their grievances, including e-mails to entire departments or people throughout the universities. Three of them went beyond their universities, seeking attention through the media or government organizations in bizarre efforts to air their complaints. Three of the six actually sued their universities, or specific people employed by the universities; another threatened to do so, and one other had sued an employer. Nearly all the targeted attackers had threatened and intimidated students and/or staff to the extent that people feared them.

In comparison, the random attackers were not abrasive or belligerent to faculty or staff. They did not have grievances that they pursued for months or years, they did not seek publicity, they did not sue their schools, they did not directly threaten anyone, and in general, people were not afraid of them. The two exceptions to the last point were Wayne Lo, who had frightened students with his violent talk, and Seung Hui Cho, who disturbed both faculty and students with his odd behavior and violent writings.

The warning signs of violence among the targeted attackers were often dramatic. For example, at Concordia University, a vice-rector

> had heard professors and secretaries complain that Fabrikant had threatened them with violence; the faculty union offices had purchased video surveillance cameras because they feared Fabrikant might get violent during his frequent unannounced visits; the vice-rector, academic, had ordered guards stationed outside her door whenever Fabrikant was around; Concordia had hired armed security to protect the rector and several others; one university administrator installed a panic button in his office; and the dean of engineering had posted a guard at his door, fearing that Fabrikant might attack or kill him. (Marsden, McIntouch, and Adolph, 1993)

Despite all this, Fabrikant continued with his teaching and research.

More recently, at the University of Alabama, the provost had barred Professor Amy Bishop from entering the building where his office was located by stationing armed police officers outside. Bishop reportedly had threatened both suicide and homicide. Despite the potential for violence to herself and others, no formal intervention was made.

At the University of Arizona, Robert Flores made threatening comments that had three professors living in fear for their lives. One even asked her congregation to pray for her safety. Flores announced to people at the university that he had a concealed weapons permit, adding to their reasons to fear him. The three professors who were afraid of him were the three that he sought out and killed.

Peter Odighizuwa was so volatile and disturbing that "students nicknamed him 'Shooter' and one student reported, 'We used to sit around and talk about how Peter's gonna shoot somebody.' Some of them went to the dean about their concerns" (DeHaven, 2009, p. 531). The director of student services "considered him so abusive and threatening that she barred him from the office unless he was accompanied by one of the deans or the president of the Student Bar Association" (DeHaven, 2009, p. 532).

These cases highlight the obvious warning signs that often preceded targeted attacks.

Though Gang Lu did not make direct threats of violence, he was demanding, unreasonable, rigid, and obsessed with getting what he wanted. He waged a tireless campaign both inside and outside the university because he did not win a prize for best dissertation. In addition, he twice made comments in writing that in hindsight were veiled threats. In one case he wrote that he would take "further action, *whatever necessary,* to protect my rights" (Chen, 1995, p. 129; italics added). Elsewhere he wrote that he was "determined to pursue a fair resolution of this matter *at any cost*" (Chen, 1995, p. 136; italics added). Thus, though there were no explicit threats, Lu left a trail of subtle, implied threats.

Though the random attackers did not leave trails of direct threats, there were warning signs. Charles Whitman talked to a friend about his desire to shoot people from the tower on campus. A few months before his attack, he disclosed to a campus psychiatrist his fantasy of "going up on the Tower with a deer rifle and shooting people" (Lavergne, 1997, p. 71). Whitman also told a professor of his homicidal urges toward his father, and his wife told her parents that she believed Whitman was capable of killing her. Thus, there were multiple warning signs of Whitman's potential for violence.

Wayne Lo did not make threats to faculty or administrators, but when around other students he talked about his thoughts of shooting people on campus. His peers were afraid of him but apparently did not report their concerns to any college personnel. When Lo had a conflict with the administration shortly before his attack, he commented, "I have the power to bring the whole school down to its knees" (Fast, 2008, p. 92). This was a threat that apparently was not recognized. In addition, a package from a gun dealer arrived on campus for Lo. Administrators were concerned about this but while they were deciding what action to take, Lo got the package and went on his rampage.

Seung Hui Cho also did not make direct threats, but his odd behavior and violent writings raised concern about his potential for violence. He wrote a story about a young man who contemplates a school shooting but does not go through with it. In addition, a professor wrote to a dean regarding Cho's writings, noting that "all of his submissions so far have been about shooting or harming people because he's angered by their authority or by their behavior" (Virginia Tech Review Panel, 2007, p. 45). During high school, Cho had handed in an assignment in which he reportedly disclosed suicidal and homicidal thoughts and indicated that he wanted to repeat Columbine.

The administration at Virginia Tech did not know this, but it indicates how long the build-up to a school shooting can be and the possible importance of including high school personnel in a threat assessment investigation of a college student.

Matti Saari talked about going on a shooting spree two years before his attack. This talk involved a rampage at a restaurant in his hometown. In Finland, the police interview anyone who wants to buy a gun. Saari's behavior during his interview was so odd that one of the officers commented later that he hoped Saari was not the next school shooter. After the attack by Pekka-Eric Auvinen in Finland in 2007, Saari traveled to Auvinen's town, took photographs of the school, and bought a gun from the same dealer who sold a weapon to Auvinen. Shortly before his attack, Saari was heard to say, "Humanity is overrated," which was the comment on the shirt that Auvinen wore during his attack. Saari posted videos online about shooting. When these came to the attention of police, he was interviewed but they found no reason to arrest him or confiscate his gun, and the next day he committed his attack. It is not known if Saari exhibited warning signs at his school, but there were clearly indications elsewhere of his upcoming rampage.

Though the full stories of the shooters' lives cannot be told here, it is important to recognize that in most cases the months and years leading up to their attacks were full of rejections, failures, thwarted hopes and dreams, and significant losses, all of which combined to create a state of desperation and hopelessness. The most notable exception is Wayne Lo, whose attack seems to have the least motivation.

Firearm Acquisition

Charles Whitman grew up owning firearms and later served in the Marines. Similarly, Robert Flores was in the military for eleven years. They apparently owned firearms as a matter of course. Many other college shooters, however, did not own guns until they began preparing for their attacks. In these cases, weapon acquisition was a warning sign of impending violence.

For example, Gang Lu purchased a gun sometime around May 1991, six months before his attack. It was that May that he found out his rival won the prize for best dissertation, which included an award of $2,500. Upon learning this, Lu filed a complaint, started a long and intensive grievance process, bought a gun, and began practicing at a local range.

Peter Odighizuwa bought a gun and began practicing with it several months before his attack. Similarly, Biswanath Halder bought guns six months before he became violent. Seung Hui Cho bought guns in February and March 2007, not long before his attack on 16 April, and practiced with them at a target range.

Valery Fabrikant, two months before his attack, applied for a permit to carry a concealed weapon and asked administrators at Concordia University to support him in his application. Given that Fabrikant had already threatened to shoot people and had university personnel fearing for their lives, this appears to have been an act of intimidation. Similarly, Robert Flores announced to his classmates that he had received a concealed-carry permit. Again, given his history of conflict at the school, this appears to have been an implied threat or act of intimidation.

In hindsight, the acquisition of firearms by people who did not habitually use them, especially when the guns were bought in the midst of intense conflict with a university, were warning signs of impending violence.

Comparison to Non-College Shooters

In recent years there have been several major shootings that did not take place on college campuses, but were committed by former college students. These include Jared Loughner's attack in Tucson, Arizona, in 2011; James Holmes's rampage in 2012 in a movie theatre in Aurora, Colorado; and the Sandy Hook Elementary School massacre by Adam Lanza in 2012. In addition, in 2009 Stephen Morgan had planned to commit a rampage attack at Wesleyan University but in the end limited his attack to killing a young woman he had known from New York University.

Other attacks at non-college sites have been carried out by former college students. In 1989 Patrick Purdy shot 31 people at an elementary school in Stockton, California; Purdy had taken classes at Delta College in Stockton. Alvaro Castillo, in 2006, murdered his father and then shot two people at his former high school in Hillsborough, North Carolina; Castillo had attended Durham Technical College. In 2009, Tim Kretschmer, after graduating from the German equivalent of high school, was attending a business school when he returned to his former school and committed a rampage attack.

These non-college shooters resemble the sample of college shooters on several dimensions. They appear to fit the typology as psychotic (Castillo, Loughner, Holmes, Lanza), psychopathic (Kretschmer), or traumatized (Purdy). I have not found sufficient information to categorize Morgan.

Many of them had role models and ideologies. Purdy was anti-Asian and attacked his former elementary school where the student body had become predominantly Asian American. Though he had attended a college with a large Asian population, for some reason he carried out his attack against young children, not his peers.

Castillo was obsessed with Eric Harris and deliberately carried out his attack on the birthday of Kip Kinkel, another school shooter. In addition, Castillo created a bizarre religious ideology in which he was saving people from a world of sin by murdering them.

Stephen Morgan was anti-Semitic and fantasized about killing Jews. Jared Loughner apparently admired Hitler (*Mein Kampf* was one of his favorite books), and Loughner was misogynistic, anti-Vietnamese, and anti-government. Adam Lanza created a huge document listing mass murderers, had an article about Steven Kazmierczak, and reportedly was particularly interested in Norwegian killer Anders Breivik. Several years prior to his attack, he created a satanic website.

This group of shooters also had family members involved in the military and/or education, as well as having their military and educational aspirations thwarted. For example, Adam Lanza's uncle was a Marine and later worked in law enforcement. Lanza longed to follow in his uncle's footsteps and join the Marines, but his mother argued against this and he eventually gave up the idea. Also, his father was a university instructor, his mother home-schooled him and reportedly volunteered at Sandy Hook Elementary School, and his grandmother was an elementary school nurse. Lanza failed in his military aspirations, failed to complete a degree at two different colleges, and attacked an elementary school.

Jared Loughner's two grandparents both served in the military; he applied to the Army but was rejected. Loughner attended Pima Community College but was asked to leave. He had a history of low-level jobs that did not last long. James Holmes had a grandfather who was a military officer and then a teacher, and his father had three college degrees and did research for the Navy and Marines. Unlike most shooters, Stephen Morgan had a successful military career. Regarding education, his father had graduated from Harvard Business School and also taught there. Morgan had taken classes at the University of Colorado and New York University but apparently had never received a degree and had a series of menial jobs.

In these cases, as with shooters, the perpetrators often failed in two domains – education and the military – where their family members had succeeded.

Though James Holmes did not commit a college shooting, there were warning signs of violence while he was at the University of Colorado. Several months before his rampage in a movie theatre, Holmes "told a fellow student in March that he wanted to kill people 'when his life was over'" (Goode, Kovaleski, Healy, and Frosch, 2012). Two months later he showed his pistol to a student. A month before his attack, Holmes met with a university psychiatrist who reported to campus police that Holmes had homicidal thoughts and could be dangerous. After that one session, Holmes sent the psychiatrist threatening text messages. Holmes amassed firearms and ammunition for six months prior to his attack, with packages arriving at his home as well as on campus (Goode, Kovaleski, Healy, and Frosch, 2012). On 7 June, the day he did poorly on an exam, he bought an AR-15 rifle (Gray, 2012). Thus, there were multiple warnings of potential violence. Why Holmes chose a movie theatre and not the university for his attack remains unknown.

Though Jared Loughner did not threaten anyone at Pima Community College, his behavior was so disturbing that multiple people were afraid of him. After the first day of a class with Loughner, a woman wrote, "He scares me a bit. The teacher tried to throw him out and he refused to go, so I talked to the teacher afterward. Hopefully he will be out of class very soon, and not come back with an automatic weapon" (Daily Mail, 2011). The student sat by the door and kept her purse handy in case she had to flee a violent attack. An instructor was so afraid of Loughner that "I always felt somewhat paranoid. When I turned my back to write on the board, I would always turn back quickly – to see if he had a gun" (Daily Mail, 2011).

Loughner had five encounters with campus police due to his disruptive behavior. Eventually, he was suspended pending a mental health evaluation. After this, he posted videos criticizing the college and the campus police. One video was called "Pima Community College School – Genocide" and included narration stating, "We are examining the torture of students," and "I haven't forgotten the teacher that gave me a B for freedom of speech." Loughner also referred to the college as "one of the biggest scams in America" (Becker, Kovaleski, Luo, and Barry, 2011). Loughner's hostility toward the college makes it surprising that he did not commit a rampage at his former college.

Overall, the non-college shooters most resemble the college shooters who were outsiders to the schools they attacked. Marc Lépine, Jillian Robbins, and Kimveer Gill all failed in the military and failed in education, not living up to the family tradition of success in both domains. In their cases, they may have attacked college students out of envy. The students were living the lives that the shooters had failed to create for themselves. Similarly, Stephen Morgan contemplated a rampage at Wesleyan University, commenting on the beautiful and smart people there (Kovaleski and Cowan, 2009). He, too, may have attacked the people he envied. The question of why other former college students chose to attack non-college settings remains unanswerable.

Recognizing Psychopathy and Psychosis

To support violence prevention, faculty and administrators need to know the signs of psychopathic behavior and psychotic functioning. Psychopathy is a complex concept with no formal diagnostic criteria, making it difficult to define concisely. In addition, the term can apply to violent offenders and nonviolent professionals in white-collar jobs. Core components of psychopathy, however, are generally agreed to include extreme narcissism and a lack of empathy, guilt, or remorse (Hare, 1993; Meloy, 1992; Millon and Davis, 1998). As noted previously, psychopaths can be charming and guileful or chronically abrasive and belligerent. The latter traits existed among all the targeted shooters presented here. The more deceptive and "slick" personality style was seen in two of the random attackers.

The targeted shooters were markedly narcissistic and demanding. For example, Robert Flores was disruptive in class, rude and insulting to his professors, and was so attention-seeking that he interfered with his classes. He complained that his professors didn't call on him enough, but when called on he rambled off topic and/or dominated the discussion. He even complained to the dean that he wasn't being called on enough, yet his behavior was so inappropriate that the dean twice warned him that he could be expelled if such behavior continued.

A common component of psychopathic functioning is to be incapable of viewing the self objectively. Thus, psychopaths frequently feel like they are victims. Flores believed the univer-

sity had mistreated him. He could not accept that his academic failures and the complaints about him were a result of his own behavior. In his mind, he was the innocent victim of an unfeeling institution. This kind of thinking has a paranoid quality. Also, the conviction that they are the victims of injustice served to justify the targeted attackers in lashing out against those they believed had wronged them.

Psychotic functioning includes multiple components, some of which are more easily observable than others. If a person has hallucinations, this may not be knowable to others unless the person reports this. In some cases, however, people can be seen holding conversations when no one else is present, or reacting to visual or auditory hallucinations. For example, Jared Loughner's mother reported, "Sometimes he would look like he was having a conversation with someone right there. Be talking to someone" (Associated Press, 2013).

More likely indicators of schizophrenia or schizotypal personality disorder include impaired social/emotional functioning and disorganized speech and behavior. The impairments in social functioning can be profound, as in the case of Seung Hui Cho, who rarely uttered a sentence. Though at times he read his work aloud in class, at other times he maintained silence even when spoken to by a professor. He not only had what is known as "poverty of speech," but also "flattened affect," meaning that he exhibited little to no emotion. These symptoms were also present in non-college shooters, including James Holmes and Adam Lanza. Another social deficit is the failure to make eye contact. This was noted in several shooters, including Seung Hui Cho, Matti Saari, Amy Bishop, and Adam Lanza.

Alternatively, psychosis can manifest not as a lack of affect, but as inappropriate affect. This was most evident with Jared Loughner, who laughed when a classmate read a poem about abortion. A professor commented, "He has this hysterical kind of laugh, laughing to himself" (Cloud, 2011). Emotional expression that is incongruent with the situation may indicate the presence of psychotic functioning.

Disorganized speech refers to statements that do not make sense, have bizarre content, or are irrelevant to the social context. For example, colleagues described Amy Bishop as going off on "'bizarre' rambles about topics not related to tasks at hand – 'left-field kind of stuff'" (Chronicle of Higher Education, 2010). Students and staff complained about her odd behavior, disjointed teaching, and lack of social skills.

Jared Loughner reportedly said many strange things that indicated psychotic thought processes. For example, he posted a video where he said, "I can't trust the current government because of the ratifications: the government is implying mind control and brainwash on the people by controlling grammar" (Fahrenthold and Williams, 2011). This is not only a paranoid statement but his misuse of language is evidence of disordered thinking. A former classmate said of Loughner, "He'd say things and I'd be shocked – random words strung together about imagination, dream, consciousness. You'd try to figure out what he was saying" (Strauss, Eisler, Gillum, Welch, 2011). A professor said, "He would say nonsensical things about 'denying math'" (Cloud, 2011).

Psychotic functioning, by itself, is not an indication of potential violence. It does indicate, however, that someone is having mental health problems and should be approached regarding resources for assistance or treatment. If psychotic functioning is observed along with angry, threatening, or intimidating behavior, the situation warrants not only a threat assessment but also a mental health evaluation. Also, knowing that someone is psychotic should be kept in mind in considering how best to approach and interview the person in question.

Cultural Issues

As noted, most shooters in this sample were not white males, with over one third of the perpetrators being Asian American or Asian Canadian. How much did cultural factors contribute to their rampages? This is a difficult issue to explore. On the one hand, a Korean journalist wrote about the fact that both One Goh and Seung Hui Cho were Korean. He was convinced that cultural factors played a crucial role in their behavior and quoted a Korean psychiatrist who said that Goh "was suffering from something that was very Korean" (Kang, 2013). On the other hand, it seems wrong to use two extreme outliers as exemplars for cultural influences, particularly since they were both psychotic and shared many characteristics with non-Korean/non-Asian shooters.

James Alan Fox addressed this issue from a different angle, considering the intense academic pressure on graduate students. He noted the all-or-nothing thinking that such pressure can engender, that to not be the best is to be a failure:

> This all-or-nothing perception can be especially pronounced for foreign graduate students … who come from cultures where failure is seen as shame on the entire family. Foreign students also experience additional pressures because their academic visas are often dependent upon their continued student status. Bad grades or failing comprehensive exams may mean being kicked out of more than just school. (Fox, 2008)

In addition to academic pressures, there are acculturation issues, language barriers, isolation from family, a lack of knowledge of local support systems, and a distrust of – or significant stigma associated with – mental health resources.

The key issue from a prevention standpoint is to not assume that school shooters are always white males and thus be blinded to warning signs when they come from people from diverse racial/ethnic groups.

Dealing with Problematic Employees

Though faculty and staff attacks are extraordinarily rare, the fact that they can occur means that campus threat assessment teams need to be equipped to deal with potential violence from anyone

in the campus community. Unfortunately, as noted by Gregory Eells, "Many campuses have teams that focus only on student behavior and do not include a more comprehensive approach to campus safety that includes a review of troubling behavior from faculty and staff" (Van Brunt, 2012, p. 175).

The difficulty in dealing with problematic faculty was discussed by John Cowan in his report on the Concordia University shooting by Valery Fabrikant (Cowan, 1994). As noted previously, Fabrikant's behavior was threatening and intimidating to the point that many people at the university feared for their lives and various security measures had been implemented. Despite this, Fabrikant continued with his duties. Similarly, Amy Bishop had made suicidal and homicidal threats and administrators were afraid for their own safety, yet Bishop continued in her position.

Cowan discussed the idea of tolerance for eccentricity that is found within academia, and how this may intersect with the notion of academic freedom so that inappropriate behavior is tolerated. He noted, however, that there is no academic freedom "to be brutish and miserable to colleagues and students … there is no academic freedom to harass … There is no academic freedom to intimidate" (1994, p. 7).

When Fabrikant's behavior was brought up as an issue for the administration to consider as a factor in his employment, an administrator responded: "I was always under the impression that we took decisions on promotions, reappointments and salary … increases purely on the basis of scholarly achievements and academic excellence rather than on the individual's behavior … I hope my understanding is still valid" (Wolfe, 1994).

Cowan also noted that administrators often are unprepared to deal with troubling behaviors among their colleagues:

> When faced with the challenge of a 'bad' colleague, whose behavior is disruptive, threatening, or merely unethical, they do not in general know what their powers are, and are massively risk-averse when it comes to exercising those powers, even when they are aware of them. (1994, p. 5)

This was written about an attack that occurred over twenty years ago and I do not know how much the situation has changed in academia. Though Amy Bishop's behavior was less threatening than Fabrikant's, the sequence of events preceding her attack suggests that universities still struggle with how to respond to problematic faculty.

DISCUSSION

Random vs. Targeted Attacks

The distinction between random and targeted attacks is important for both understanding and preventing college shooters. Those who committed targeted attacks had real-life grievances with their universities and faced significant financial stress. Their reactions were completely inappropriate and they failed to see that their situations were a result of their own behavior. Nonetheless, they were responding to actual failures and frustrations.

In contrast, those who committed random attacks at schools they attended did not have the same external pressures or failures. They were more influenced by their own internal psychological dynamics. Charles Whitman was frustrated with himself for not achieving his career goals, but this had nothing to do with the University of Texas. Seung Hui Cho had run-ins with campus police and administrators, but his manifesto said nothing about these; it presented his paranoid and grandiose delusions of defending himself and making the world a better place. Steven Kazmierczak had been a star pupil at Northern Illinois University. He was attending graduate school elsewhere when he decided to return to NIU and kill people. There was no ongoing feud with the university or anyone who was part of it.

The targeted attackers unleashed their rage at the people whom they believed had wronged them. The random attackers acted out indiscriminately without rational external causes. This distinction is noteworthy in light of the typology of shooters, with the targeted shooters all having features of psychopathy and most of the random shooters being psychotic.

The distinction between random and targeted attacks is also relevant for prevention. The targeted attacks were easier to anticipate because there were long-standing conflicts between the perpetrators and their schools, as well as threats and intimidating behavior that caused students, faculty, and administrators to live in fear. The key issue is that despite the drawn out grievance campaigns and threats, no preventive action was taken. Many of the random attackers also left warning signs, but they were less obvious than with the targeted shooters. This highlights the need for thorough investigations and sensitivity to indirect threats.

A note of caution should be kept in mind: neither direct nor indirect threats can be assumed to indicate impending violence. People often make threats that they have no intention of carrying out. This is why it is essential to have a threat assessment process in place to evaluate the evidence of potential violence.

Implications for Campus Safety

The good news about preventing school shootings is that many shooters leave a long trail of warning signs. The bad news is that sometimes they do not, and even when they do, it is often not clear what action is necessary to maintain safety. Referring them for counseling or requiring them to get a mental health evaluation before they are allowed to continue their studies may be helpful interventions, but are not necessarily a guarantee of safety. In some cases, more significant action may be warranted.

For example, the presence of a direct threat may constitute a legal violation as a "terroristic threat," allowing the police to be involved. In the presence of warning signs without a direct threat, the administration needs to conduct a threat assessment, including interviewing the person in question, peers, family,

and staff, as well as searching the student's room, computer, and online presence. Such an investigation may reveal sufficient evidence to determine an appropriate course of action. This action could include referral to treatment, separation from the institution, case management, parental involvement, or additional monitoring.

Preventing attacks by outsiders or former students may not be possible. Shooters such as Jillian Robbins and Kimveer Gill were unknown to the schools they attacked. In a different scenario, Steven Kazmierczak was no longer a student at NIU and thus was off the school's radar. One step schools can take to maintain vigilance for potential attacks is to set up online alert systems to detect threats posted online that identify a school by name (Van Brunt, 2012, p. 285).

Limitations of the Study

This study was limited to a sample of perpetrators of college attacks, examining those that have been best documented. Within these cases, there was the further limitation of incomplete information, with more information being available for some than others. There were also elements of subjectivity in placing the shooters within the psychological typology (psychopathic, psychotic, traumatized), as well as in identifying their attacks as targeted or random. Other researchers might interpret the cases differently.

Directions for Further Research

Research into more cases of multi-victim campus attacks would expand the sample presented here and result in more robust conclusions. Also, an analysis of single-victim attacks would allow for a comparison of these attacks with multi-victim attacks in terms of psychological type, pre-attack behavior, and warning signs of violence.

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