

A Case Analysis of the Perpetrator of the Arapahoe High School Attack in 2013: Application of the Terrorist Radicalization Assessment Protocol (TRAP-18)

Clare S. Allely¹, Courtney Tassin², Sonya A. McLaren³, and John Horgan⁴

¹ Department of Psychology, University of Salford

² Department of Psychology, Louisiana State University National Center of Biomedical Research and Training: Academy of Counterterrorism Education

³ Department of Psychology, Criminal Justice Decision Making Laboratory, Carleton University

⁴ Department of Psychology, Georgia State University

This article presents a case study examining the pathway to violence of the perpetrator of the December 13, 2013, Arapahoe High School shooting in Centennial, Colorado, United States. The analysis focused on identifying which proximal and distal indicators were present in the case and assessing whether the configuration of the perpetrator would have prompted active management under Terrorist Radicalization Assessment Protocol–18 (TRAP-18) guidelines. The purpose was not to evaluate the “preventability” of the attack but rather to examine whether TRAP-18 indicators meaningfully captured relevant risk factors in a nonterrorism context. A retroactive application of the TRAP-18 was completed. Based on open-sourced data, the analysis using the TRAP-18 identified six proximal warning behaviors (pathway, fixation, identification, energy burst, leakage, and last resort) and four distal characteristics (personal grievance and moral outrage, thwarting of occupational goals, changes in thinking and emotion, and failure of sexually intimate pair bonding) that were present. Results suggest that the TRAP-18, although originally developed for lone-actor terrorism, may demonstrate utility in cases without a terroristic nexus, such as school-based targeted violence. By applying the TRAP-18 outside its intended domain, this study explores the potential broader applicability of structured professional judgment tools in behavioral threat assessment. The case highlights practical and clinical implications for integrating structured professional judgment tools into multidisciplinary threat assessment processes to enhance consistency and decision making.

Public Significance Statement

Applying the Terrorist Radicalization Assessment Protocol–18, a structured professional judgment tool for lone-actor terrorism, retroactively to the perpetrator of the Arapahoe High School shooting in the United States in 2013 revealed that the perpetrator exhibited six of the eight proximal warning behaviors (pathway, fixation, identification, energy burst, leakage, and last resort) and four of the ten distal characteristics (personal grievance and moral outrage, thwarting of occupational goals, changes in thinking and emotion, and failure of sexually intimate pair bonding). Karl Pierson presented with 75% of proximal traits and 40% of distal traits contained within the Terrorist Radicalization Assessment Protocol–18. This case study suggests the Terrorist Radicalization Assessment Protocol–18 may represent a useful and potentially effective tool in school shooting threat assessments.

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Clare S. Allely  <https://orcid.org/0000-0001-7640-9505>
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Behavioral threat assessment involves the systematic evaluation of an individual of concern to determine whether they pose a risk of violence. Behavioral threat assessment focuses on identifying risk factors, protective factors, and patterns of concerning behavior, with the aim of informing intervention and management strategies that reduce the likelihood of violence (National Threat Assessment Center, 2024). Within this context, structured professional judgment (SPJ) tools have been introduced to enhance the consistency and reliability of threat assessment (Borum et al., 2022). One example is the Terrorist Radicalization Assessment Protocol–18 (TRAP-18), a framework composed of 18 indicators—eight proximal warning behaviors and ten distal characteristics—associated with lone-actor terrorist violence (Meloy & Gill, 2016). In the context of a well-trained and authorized multidisciplinary threat assessment process, the TRAP-18 is one useful way to ask questions and analyze information in a given case that has come to attention. The TRAP-18 is a SPJ tool consisting of 18 indicators: eight proximal warning behaviors and ten distal characteristics (Meloy & Gill, 2016). Proximal warning behaviors are dynamic and acute, suggesting the need for active case management. Distal characteristics are more static and dispositional, indicating background or historical vulnerabilities. School shootings, while distinct from terrorism, share certain behavioral pathways, such as grievance formation, fixation, and evidence of planning (Cornell, 2020; Schildkraut et al., 2022). However, most research in school-based threat assessment has focused on models specifically developed for educational settings, such as the Comprehensive School Threat Assessment Guidelines (CSTAG; Cornell, 2018a).

Comparatively little work has examined whether tools designed for other domains, like the TRAP-18, may have utility in assessing threats within schools. It is used internationally (United States, Canada, Germany, Netherlands, United Kingdom, Australia, and South Africa) by professionals in

law enforcement, intelligence, mental health, and security sectors. Once coding is conducted, assessors are provided a variety of management suggestions. For example, the presence of any proximal warning behavior signals the need for active case management, while distal characteristics alone suggest a case should be monitored but not necessarily actively managed (Meloy & Genzman, 2016). Such management suggestions are discussed in the training for the TRAP-18 and outlined in the manual. The TRAP-18 has been the subject of increasing empirical evaluation. For instance, studies have demonstrated acceptable interrater reliability and found that its indicators can retroactively distinguish individuals who committed lone-actor terrorist attacks from comparison groups (e.g., Goodwill & Meloy, 2019; Guldinann & Meloy, 2020).

There have been a few studies to date which have examined similarities and differences between lone-actor attackers compared with other extreme violent offenders such as public mass murderers. For instance, Gill et al. (2021) examined a wide range of demographic, psychologic, and behavioral variables in a group of 71 lone-actor terrorists and a group of 115 public mass murderers. Findings revealed that, overall, there was no support for lone-actor terrorists and public mass shooters being distinct offender types. Of the 180+ variables [the exact number is not specified but the variables included socio-demographic information, preattack behaviors, behaviors which are specific to the predicate offense and postevent behaviors] that they investigated, the majority (80%+) were found not to be significantly different between the two groups. In other words, using logistical regression there were more variables which united the two types of extreme violent offenders than separated them. For instance, Gill and colleagues found similar mobilization pathways, similar forms of violence committed, with slightly dissimilar

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Correspondence concerning this article should be addressed to Clare S. Allely, Department of Psychology, University of Salford, Frederick Road, Manchester, M6 6PU, United Kingdom. Email: c.s.allely@salford.ac.uk

motivational structures between the two groups. Motivational structures were also found to not clearly different between the two groups.

Additionally, Clemmow et al. (2022) compared a group of 183 United States offenders, including 68 lone-actor terrorists, and 115 solo mass murderers. Based on the risk analysis framework, five components of the offending process were explored, namely, propensity, situation, preparatory, network, and leakage. Cluster analysis identified Profiles within each of these components. Specifically, propensity (stable, criminal, unstable), situation, low stress, high stress (social), high stress (interpersonal), preparatory (fixated, novel aggression, equipped, clandestine, predatory, preparatory), leakage (high leakage, low leakage), and network (lone, associated, connected). Findings showed that although there were some significant differences between the two groups, they found using cluster analysis that offenders previously classified as lone-actor terrorists or mass murderers occupy a “noteworthy shared space” (p. 558). The findings from this case study article would lend further support to the findings by Gill et al. (2022) and Clemmow et al. As also highlighted by Gill et al., Borum and colleagues have suggested that “Analyzing cases by their features, rather than by their types, might better aid the investigative process, particularly if each dimension is linked to a key facet of the attack and tracked across the spectrum of attack-related activity from idea to action” (Borum et al., 2012, p. 104).

Previous Case Studies Which Have Utilized the TRAP-18 Retroactively

Case studies have been published which have utilized the TRAP-18 retroactively in order to explore whether it has reliability in cases where there is a lone-actor terrorist or self-initiated terrorist nexus (e.g., Allely, Wicks, & McLaren, 2024; Böckler et al., 2015; Böckler et al., 2017; Collins & Clark, 2021; Erlandsson & Reid Meloy, 2018; Meloy et al., 2015; Meloy & Genzman, 2016; Tassin & Allely, 2024).

There has been very little study of whether the TRAP-18 provides structure and reliability when applied to school-based targeted violence. Allely, Scheithauer and Langman (2024) applied the TRAP-18 to the case of Nikolas Cruz (herein referred to as NC), the perpetrator of the Marjory Stoneman Douglas High School shooting. Retroactive analysis using publicly available materials revealed that

NC exhibited six of the eight proximal warning behaviors (75%) and eight of the ten distal characteristics (80%). This suggests the TRAP-18 may be relevant for school shooting threat assessments. This article seeks to build upon Allely, Scheithauer, and Langman’s article by replicating the methodology of applying the TRAP-18 to a school shooter to retest the utility of the TRAP-18 on another school-based attacker. As mentioned earlier, the TRAP-18 has been used internationally. For instance, Corner and Pyszora (2022) was the first to assess the face and content validity of the TRAP-18 and also the applicability for this tool within the Australian context.

The present case study works to address questions around the TRAP-18’s content validity previously identified through previous studies by retroactively applying the TRAP-18 to the case of Karl Pierson (herein referred to as KP), the perpetrator of the December 13, 2013 attack at Arapahoe High School in Centennial, Colorado. Pierson’s attack, which resulted in the death of one student and his own suicide, was preceded by concerning behaviors that were known to school officials and prompted a school-based threat assessment prior to the incident (Woodward & Goodrum, 2016). This case, therefore, provides an opportunity to examine how the TRAP-18 might have performed if applied at the time.

This case study does not aim to determine “preventability” in hindsight. Rather, its goal is to explore the applicability and potential utility of the TRAP-18 outside its original terrorism-focused context. Specifically, this article examines whether the TRAP-18 can provide structured insights into school-based nonterroristic targeted violence and whether its indicators align with behavioral patterns exhibited by an adolescent school shooter lacking an ideological or political motive.

Method

Aims of the Present Case Study

This study employed a retroactive case study design to examine the circumstances surrounding the December 13, 2013, attack at Arapahoe High School in Centennial, Colorado. Case study methodology allows for detailed, contextualized analysis of rare and extreme behaviors that cannot be experimentally replicated for ethical and practical reasons (Hartley, 2004). In threat

assessment research, such designs provide valuable insights into offender pathways, risk factors, and missed opportunities for intervention, while recognizing the limitations of retroactive analysis.

A retroactive application of the TRAP-18 was undertaken using publicly available information from investigative reports, court documents, peer-reviewed analyses, and media coverage (Arapahoe County Sheriff's Office, 2014; Kanan et al., 2016; Langman, 2015; Woodward & Goodrum, 2016). Specifically, some of the open-source information included: academic papers (e.g., Langman, 2016), Arapahoe High School Depositions, deposition exhibits relating to the incident at Arapahoe High School, excerpts of KP's journal [KP's full journal has not been made public]; Investigative Report: Arapahoe High School by Kristin McCauley; Postincident Review: Arapahoe High School Active-Shooter Incident; Postincident Review: Arapahoe High School Active-Shooter Incident and A Review of Psychological Safety and Threat Assessment: Issues Related to the Shooting at Arapahoe High School on December 13, 2013. Also, The Arapahoe County Sheriff's Office released over two thousand pages of documents. We used publicly available official records and original documents which were listed on the schoolshooters.info website at <https://schoolshooters.info/karl-pierson> for this case. These documents were official documents such as court records and not media articles which may be inaccurate or presented with bias.

Two of the authors (CSA and CT) reviewed the available, relevant open-source information to conduct the coding for the retroactive application of the TRAP-18. If at least 50% of proximal and distal indicators are measured as present this would be considered support for the potential value and applicability of TRAP-18 with this group. Our rationale for this percentage is that Meloy and Hoffmann (2014) previously stated that with respect to the proximal warning behaviors, on average, about half of these behaviors occur in those individuals who have carried out an act of targeted violence.

The TRAP-18 was applied to the available case information regarding KP. Each of the 18 indicators were coded for presence or absence based on documented behaviors and statements preceding the attack. Two of the authors (CSA and CT)

independently applied the TRAP-18 retroactively and then met to discuss their coding. Agreement was found across all codes between the two authors. It is important to note that, in practice, this is not the proposed way to utilize the TRAP-18. We made the decision to approach it this way in order to add a layer of reliability to the coding, as well as this being the approach adopted by Allely, Scheithauer, and Langman (2024) in their case analysis of the perpetrator of the Marjory Stoneman Douglas High School shooting. Consistent with previous authors who applied the TRAP-18 retroactively to the perpetrator of the Frankfurt Airport attack in 2011 (a 21-year-old man who shot several U.S. soldiers, murdering two U.S. airmen, and severely wounding two others; Böckler et al., 2015) and the authors who applied the TRAP-18 retroactively to the perpetrator of the Marjory Stoneman Douglas High School shooting (Allely, Scheithauer, & Langman et al., 2024), the two authors who conducted the coding for the present study, focused on the following:

1. Sequences of biographical events in the perpetrator's life to identify personal crises, turning points, and triggers leading to changes in his thinking, emotions, and behavior.
2. Testimonies and writings of the perpetrator himself to gain insights into his perception, self-concept, and implicit theories, as well as conscious and unconscious motives for behavior.
3. The perpetrator's habits and actions observed by the social environment to discern escalating and warning behaviors in the run-up to the deed.
4. Constant or changing social networks and social reactions that were meaningful to the perpetrator to make out associates and enemies as well as to understand exacerbating and mitigating effects on the perpetrator's behavior, thinking, and emotions (Böckler et al., 2015, p. 155).

While this procedure differs from operational practice, in which multidisciplinary teams evaluate cases, it was used here to provide additional reliability within the research setting (Goodwill & Meloy, 2019). CSA and CT are both trained in the use of the TRAP-18 and utilize the TRAP-18

manual and coding documents. Both CSA and CT have applied the TRAP-18 in previous peer-reviewed publications. CT has been trained in the TRAP-18 for 5 years and has applied the tool to over 45 individual threat assessment cases within a community based targeted violence prevention program. Additionally, Linda Kanan, a school psychologist, was one of the authors of the “Review of Psychological Safety and Threat Assessment Issues Related to the Shooting and Arapahoe High School on December 13, 2013” which was presented to the Littleton Public School District and Board of Education, January 15, 2016. Kanan reviewed our article and provided additional information which we have included in the article as a personal communication.

Case Study of KP

Life Prior to Attack

KP was born on September 3rd, 1995. KP’s parents divorced when he was a junior in high school and he lived with his mother and sister during the time of the attack (McCauley, n.d.). In interviews conducted after the attack, his sister described him as a good brother and kind to her, and his father mentioned that he was a proficient shooter through his involvement in the Venture Crew program that held a firearms related event (McCauley, n.d.). In the investigative report, redacted interviews with a variety of KP’s peers described him as intelligent, liberal, very sweet, quirky, verbally aggressive, self-serving narcissist, “honestly scary” and that he “liked to get his point across” and “shock people to get their reaction” (McCauley, n.d.). KP was a member, and later captain, of the speech and debate team at Arapahoe High School and was described by his coach as “nerdy, socially inept and clunky” (McCauley, n.d.). This same coach admitted to having reservations about promoting KP to captain due to poor decision making at tournaments and inappropriate comments but hoped that it would grow and develop his self-confidence (McCauley, n.d.). The coach continued to have difficulties with KP’s leadership and overall behavior, ultimately resulting in KP’s removal as captain on September 3rd, 2013. The precipitating behavior included another teacher reporting that KP was verbally bullying other students in class and an incident where he no-

call/no-showed for a team fundraiser that he had signed up to support (McCauley, n.d.). During the meeting regarding his removal as captain, his coach recalled a look of hatred in KP and had expressed to other teachers that he had a “bad gut feeling” about KP (McCauley, n.d.).

The afternoon following KP’s removal, another teacher approached the coach to inform him that he overheard KP state something to the effect of “I’m going to kill that [Coach’s name]” during a heated conversation between KP and his mother. This prompted the coach to inform the school administration, who later spoke with KP’s mother, who corroborated the threat to kill overheard by the teacher and agreed to keep him out of school for the remainder of that week (Arapahoe County Sheriff’s Office, 2014, p. 1407; McCauley, n.d.). KP’s mother would bring KP to a local behavioral health facility for a mental health assessment the Monday following this incident—of which the therapist reported to KP’s mother that KP was not a threat to himself or others. KP was never formally suspended for this incident, but a reentry meeting was required prior to his return.

A threat assessment was conducted by the school psychologist prior to KP’s return to the school, who opined that KP was safe to return to school. KP was allowed to participate in the speech and debate team for tournaments but was banned from attending practices—a boundary that he would disregard. Following his removal as captain, KP’s behavior escalated. He was reported to act out in classes—becoming more disrespectful to staff, verbally aggressive toward his peers and disruptive—banging on classroom doors and screaming when accidentally locked out of the classroom on one incident. His grades dropped significantly—his once B average dropped to low Ds. This academic decline occurred during the course of his senior year at Arapahoe High School, particularly in the months leading up to the attack. Additionally, with specific regard to the banging on classroom doors, KP left the classroom to go to the bathroom. When he came back he found the door to the classroom had been locked and a student would not unlock it for him. In response to this, KP pounded the door for 30 s. When the teacher opened the door she asked KP “Are you serious” and KP yelled his response, “as a heart-attack.” His pounding on the door was so forceful one of the teachers four doors down heard him (Arapahoe County Sheriff’s Office, 2014, p. 1518).

Attack

On December 13, 2013, at approximately 12:33 pm, KP entered Arapahoe High School armed with a pump-action shotgun, three Molotov cocktails (which is a hand-thrown incendiary weapon which is a frangible or fragile container which is filled with flammable substances and has a fuse) and a hunting knife, through unsecured doors that led to an area referred to as the “Trophy Hallway” where students frequently congregated. A school janitor noticed KP running to the doors with the weapon and was able to tell administration to initiate a lockdown. Immediately upon entering the Trophy Hallway, KP fired one shot aimed at two female students sitting on a bench. He then fired a second and third shot that hit one student, later identified as Claire Davis, in the head and in the back. KP then ran through the hallway toward the library and was heard yelling “Where the fuck is [Coach’s name]?” As he entered the library, he fired two shots at the coach as he [the coach] ran out of a door leading to outside of the school. The coach was able to escape uninjured. KP then set the shotgun down, lit a Molotov cocktail and threw it onto a bookcase, setting it on fire (McCauley, n.d.). KP then took his own life with a gunshot to the head in the library, where he was found by the responding school resource officer.

Presence or Absence of TRAP-18 Indicators

A retroactive application of the TRAP-18 was applied to this case. We have chosen to code warning behaviors up until the attack rather than prior to the threat assessment process that he underwent because we wish to focus on examining the applicability and utility of the TRAP-18 to a juvenile in this context. We recognize that we have the advantage of retroactive analysis and have information that was not known (or had not yet been exhibited) by KP at the time he was in the threat assessment process.

Two of the authors independently coded the available information and later met to conduct consensus coding. In the case of KP, six proximal warning behaviors (pathway, fixation, identification, energy burst, leakage, and last resort) were coded and four distal characteristics (personal grievance and moral outrage, thwarting of occupational goals, changes in thinking and emotion, and failure of sexually intimate pair bonding). See [Table 1](#) for a summary of the findings.

Discussion

This retroactive case application examined whether the TRAP-18, originally developed for lone-actor terrorism, could meaningfully capture relevant warning behaviors in a school-based targeted violence case. The analysis identified the presence of six proximal warning behaviors (pathway, fixation, identification, energy burst, leakage, and last resort) and four distal characteristics (personal grievance and moral outrage, thwarting of occupational goals, changes in thinking and emotion, and failure of sexually intimate pair bonding). Overall, KP presented with 75% of proximal traits and 40% of distal traits contained within the TRAP-18. As mentioned in the introduction, [Allely, Scheithauer, and Langman \(2024\)](#) were the first to apply the TRAP-18 to the case of the perpetrator (NC) of the Marjory Stoneman Douglas High School shooting. In their retroactive case analysis, NC exhibited six of the eight proximal warning behaviors (pathway, fixation, identification, leakage, last resort, and directly communicated threat) and eight of the ten distal characteristics (personal grievance and moral outrage, framed by an ideology, dependence on the virtual community, thwarting of occupational goals, changes in thinking and emotion, failure of sexually intimate pair bonding, mental disorder and criminal violence). Overall, NC presented with 75% of proximal traits and 80% of distal traits contained within the TRAP-18. Although there are only two school shooter cases where the TRAP-18 has been applied retroactively to date, it is noteworthy that in both of the school shooting cases the number of proximal warning behaviors is much higher than the average for an individual terrorist or person of concern which is around 50% ([Meloy & Hoffmann, 2014](#)).

TRAP-18 and Broader Applicability

The findings suggest that several TRAP-18 indicators aligned with documented behaviors and characteristics in KP’s case. This does not just provide support for the TRAP-18 in terms of providing structure and applicability when applied to school-based targeted violence, but it also has broader implications for researchers, threat assessment professionals, and practitioners thinking about the uniqueness of terrorism. We recommend further evaluations of the psychometric properties

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Table 1
Presence or Absence of TRAP-18 Indicators in the Case of KP

TRAP-18 indicator	Coding (present, absent, unknown)	Coding justification
Proximal warning behaviors		
1. Pathway (attack research, planning, or implementation)	Present	<p>KP engaged in documented attack-related research, planning, preparation, and implementation, as shown through his journal writings which included his plan (“Project Saguntum”), explicit statements of intent to “shoot up” the school, procurement of weapons and ammunition, and final preattack preparations on the day of the attack consistent with the TRAP-18 indicator criteria. Further detail can be found below: On Tuesday September 17, 2013, KP initiated his plan, calling it “Project Saguntum,” a “10-year subconscious project” to exact revenge. He stated, “I will shoot up my school—Arapahoe High School—before the year is over.” (Except from KP’s journal, https://schoolshooters.info/sites/default/files/pierson_journal_1.0.pdf).</p> <p>On Thursday, October 3, 2013, he wrote in his journal about the time he would need to give himself in order to build his arsenal in order to carry out his attack: “Since day 1, my job has been to conspire to shoot up the school. Every semester, I had a class I despised, and it was on the list. Now, I have means to achieve this diabolical end, and I am excited. The date is set for mid-November, I need time to build my arsenal” (Except from KP’s journal, https://schoolshooters.info/sites/default/files/pierson_journal_1.0.pdf).</p> <p>KP attended training for firearms and had achieved qualification certificates from the NRA and an identification badge for a Rifle Archery Muzzle Loading Shotgun (McCaulley, n.d., p. 26). Please note that there is no publicly available information on the dates that KP attended firearms training and gained these qualifications from the NRA.</p> <p>According to his journal entries between December 8–13, 2013, KP purchased weapons and ammunition, including a Stevens 320 shotgun and Molotov cocktail materials. On Sunday, December 8, 2013, he stated in his journal: “it was productive weekend. I bought my Stevens 320. It was not the initial gun I was expecting, but I think it will work better. I like the pistol grp. It was quite the process to buy, it was waiting, and waiting, but I loved it. Mom does not know about it.” Also on Thursday, December 12, 2013, he wrote in his journal: “I went to Cabela’s and I bought a sling, ammo belts, and of course, ammo. It included 5 sabot slugs! I think I’ll need more. Luckily, I’ll take off tomorrow.”</p> <p>He purchased a shotgun which he called “Kurt Cobain” on 6th December 2013 (Woodward & Goodrum, 2016).</p> <p>He purchased shotgun shells and belt at Cabela’s on 12th December 2013 (Woodward & Goodrum, 2016). On December 13, the day of the attack, he finalized his gear and wrote: “I am dressed to kill.”</p> <p>KP demonstrated an escalating preoccupation with his debate coach, marked by repeated statements of hatred and desire to kill him, as well as a broader fixation on prior school attacks, evidenced by his searches for Columbine and Sandy Hook related content, consistent with the TRAP-18 definition of increasingly pathological, grievance-driven focus. Further detail can be found below:</p> <p>KP was a member, and later captain, of the speech and debate team at Arapahoe High School (McCaulley, n.d.). The coach had difficulties with KP’s leadership and overall behavior, ultimately resulting in KP’s removal as captain on September 3rd, 2013. The afternoon following KP’s removal—another teacher</p>
2. Fixation (abnormal preoccupation on either an individual or cause)	Present	

(table continues)

Table 1 (*continued*)

TRAP-18 indicator	Coding (present, absent, unknown)	Coding justification
3. Identification (self-identification as a fighter/warrior/agent of change or identification with previous attackers)	Present	<p>approached the coach to inform him that he overheard KP state something to the effect of “I’m going to kill that [Coach’s name]” during a heated conversation between KP and his mother (Arapahoe County Sheriff’s Office, 2014, p. 1407; McCauley, n.d.). KP spoke to numerous people about how angry he was at the coach—how much he hated him and wanted to kill him (Arapahoe County Sheriff’s Office, 2014, pp. 1905–1906).</p> <p>KP’s browser history on this laptop revealed searches and access to websites connected to “rampage” and “school massacre” events, such as Columbine and Sandy Hook (McCauley, n.d., p. 29). The specific dates of these searches for Columbine or Sandy Hook are not publicly available. However, there is evidence to suggest it was at least 6 weeks before the attack.</p> <p>KP displayed identification with prior attackers and violent perpetrators through his emulation of Columbine shooters’ language and symbolism, consumption of literature about school shootings, anniversary-linked attack timing, interest in weapons and extremist iconography, and behavioral imitation of known offenders, consistent with the TRAP-18 definition of adopting a pseudocommando or attacker identity. Further detail can be found below:</p> <p>In October 2013, KP was observed looking at pictures of guns and mass shootings (e.g., the Sandy Hook Elementary School Shooting attack) on computer in the cafeteria at school (Woodward & Goodrum, 2016). A book about the Columbine High School attack was found by police when they searched his mother’s home.</p> <p>There does appear to evidence that KP identified with Eric Harris, one of the Columbine High School Shooters. For instance, in KP’s journal he echoes the words of Eric Harris. For example, Harris wrote, “I’m full of hate and I love it.” KP wrote, “I am filled with hate, I love it.” Also, Harris said, “It’s a weird feeling knowing you’re going to be dead in two and a half weeks.” Pierson wrote, “It’s weird going through life knowing that in 19 days, I’m going to be dead.” (see: Langman, 2016). Also, prior to his attack, KP went bowling (McCauley, n.d., p. 31). This may be an example of imitating Eric Harris and Dylan Klebold, who allegedly went bowling on the morning of their attack [Though, as highlighted by Langman, 2016, this turned out to be false, the idea became widespread, and was the inspiration for the title of the film—“Bowling for Columbine”].</p> <p>KP had books about school shootings and being a sociopath, including titles such as <i>Why kids kill: Inside minds of school shooters</i>, <i>Confessions of a Sociopath</i>, <i>Columbine: A true crime story</i>, and <i>The Anarchist’s Cookbook</i> (Arapahoe County Sheriff’s Office, 2014, p. 1490; Langman, 2016).</p> <p>The attack at Sandy Hook took place on Friday, 14 December 2012. KP carried out his attack on Friday, 13 December 2013 which was the closest he could get to the anniversary of Sandy Hook because 14 December was a Saturday and school would be closed (Langman, 2016).</p> <p>The Columbine shooters (Eric Harris and Dylan Klebold) used the abbreviation “NBK” to refer to their attack. “NBK” stands for <i>Natural Born Killers</i> which was one of their favorite films. KP also used the abbreviation “NBK” and had this film listed as one he liked. KP also wrote “KMFDM” on a test at school when he got a disappointing grade. KMFDM refers to “no mercy/pity for the majority” which was one of Harris’s favorite music groups (Arapahoe County Sheriff’s Office, 2014, p. 1425, 1,447; Langman, 2015).</p>

(table continues)

Table 1 (*continued*)

TRAP-18 indicator	Coding (present, absent, unknown)	Coding justification
4. Novel aggression (an initial violent act which is carried out which is unrelated to the target)	Unknown	<p>KP was interested in Hitler and the Nazis (Arapahoe County Sheriff's Office Investigative Report, n.d.-b) and so was Eric Harris who he identified with. His screensaver on his computer was a swastika, KP shared biased and prejudiced remarks, was noted to have been a racist, stated his hatred for Black people, and shared anti-Catholic feelings (Arapahoe County Sheriff's Office, n.d.-b; Langman, 2016).</p> <p>Although KP exhibited aggressive acts and multiple threats toward others, these behaviors were longstanding and not a first-time, unrelated act of violence that would represent a discrete "test" of capability, leaving insufficient evidence to determine whether true novel aggression warning behavior occurred in alignment with the TRAP-18 definition. Further detail can be found below:</p> <p>KP made threats to kill and harm (e.g., to his debate coach). However, he had been doing this for many months prior to the attack. One classmate said that KP had threatened to kill him. One peer stopped being friends with KP because KP had threatened someone for being a Christian. He had also threatened to burn down a church (Langman, 2016).</p> <p>There is evidence of aggressive behavior exhibited by KP many years prior to the attack. For instance, he hit two students with his lunchbox in November 2003 (Woodward & Goodrum, 2016).</p>
5. Energy burst (in the lead up to the act, there is an increase in the frequency or variety of behaviors associated with the targeted individual or cause)	Present	<p>KP exhibited a marked escalation in attack-related activity in the weeks preceding the incident, including intensified preparations, weapon and ammunition purchases, and increasingly focused journal entries, consistent with the TRAP-18 definition of a preattack energy burst. Further detail can be found below: Increased preparation in the lead up to the attack. In the weeks before the attack, we can see an intensification of his preparations (such as weapon purchases as well as journal entries; McCauley, n.d.).</p>
6. Leakage (where the individual consciously or unconsciously communicates to an outside party of their intent for violence)	Present	<p>KP communicated aspects of his planned violence to peers by displaying photographs of his recently purchased shotgun, referring to it by name, and making threatening statements ("Don't make me show you Kurt Cobain"), meeting the TRAP-18 criteria for leakage. Further detail can be found below: On the 12th December 2013, the day before the attack, KP showed many peers photographs on his cell phone of his recently purchased shotgun (he made the purchase on 6th December 2013). KP told some of them that he named the shotgun "Kurt Cobain." He said to one of his peers: "Don't make me show you Kurt Cobain" (Woodward & Goodrum, 2016).</p>
7. Last resort (the individual believes violence is their only option to solve their grievance(s))	Present	<p>KP's journal entries reflected a sense of urgency and violent action imperative, including his statement "I am dressed to kill" on the morning of the attack, indicating psychological finality and intention consistent with the TRAP-18 definition of last resort behavior. Further detail can be found below: KP's journal entries indicates his desperation and a sense of finality. For instance, phrases such as "I am dressed to kill" which he wrote in his journal on Friday, December 13, 2013. This phrase would be considered a statement indicating a plan is about to be executed.</p>

(table continues)

Table 1 (continued)

TRAP-18 indicator	Coding (present, absent, unknown)	Coding justification
<p>8. Directly communicated threat (which involves the communication of violence to the target or law enforcement prior to the attack)</p>	Absent	<p>There is no publicly available evidence that KP directly communicated a threat to his target or authorities prior to his attack. Also, KP did not make any direct threats to his coach (Arapahoe County Sheriff's Office, 2014, p. 1426).</p>
<p>Distal characteristics</p> <p>1. Personal grievance and moral outrage (confluence of factors shaping an individual to have a strong point of view regarding the targeted individuals or cause)</p>	Present	<p>KP exhibited multiple personal grievances, including interpersonal rejection, academic decline, loss of valued roles, and intense anger following his demotion from the debate team, all of which were paired with journal narratives of injustice and retaliation. These behaviors are aligned with the TRAP-18 definition of personal grievance. Further detail can be found below:</p> <p>KP's parents divorced when he was a junior in high school. One person commented that he seemed to get angry after this. It appears that divorce proceedings began in late 2011 and were finalized in August 2012. KP lived with his mother and he would see his father but never at his father's apartment (Langman, 2016).</p> <p>There is evidence that KP experienced significant rejections from girls he showed an interest in. One peer described how KP "got rejected a lot." Also, a friend said that KP "had trouble getting dates and would be sullen about that. He tried to obtain dates with girls who were 'out of his league' or unavailable." In August 2013, KP's mother got a call from a man who said that a male had called his house from the KP home telephone and "said he was going to kill his daughter." KP admitted to his mother that he threatened to kill the girl (Langman, 2016).</p> <p>In KP's journal, he wrote an entry on Sunday, September 22, 2013 "words hurt, can mold sociopath, and lead someone a decade later to kill" (McCauley, n.d., p. 30). There appears to be injustice and consequent urge for retaliation on KP's own account. On Tuesday September 17, 2013, KP wrote in his journal about his belief he was a psychopath: "I am a psychopath with a superiority complex" (McCauley, n.d., p. 27). KP was noted as being unable to take responsibility for his behavior and would be unable to move on from conflicts, where he would stew and let emotions bubble up into rage (Langman, 2016).</p> <p>KP's laptop, which had the profile name "Grand exalted leader" and a username of "Karl Pierson," had a diary that began Tuesday September 17, 2013 and concluded the day of the attack (Arapahoe County Sheriff's Office, 2014, p. 1492; McCauley, n.d.). This indicates that the first noted date that KP began recording his injustices, violent ideations, and revenge approximately 3 months prior to the attack. KP was demoted from his team captain position on the speech and debate team on September 3, 2013 (McCauley, n.d.). KP was said to have been "ivivid and threatening" following this demotion (McCauley, n.d., p. 5), to the point where debate team coach, Mr. Tracy Murphy was extremely worried for his safety where resignation from his position was contemplated (Langman, 2015). An individual notified that following KP's meeting with debate team coach, Mr. Tracy Murphy, that they heard KP screaming to his mom in the parking lot that "I'm going to kill that [debate team coach, Mr. Tracy Murphy]" (McCauley, n.d., p. 6).</p>

(table continues)

Table 1 (*continued*)

TRAP-18 indicator	Coding (present, absent, unknown)	Coding justification
<p>2. Framed by an Ideology (which involves justifying beliefs for action)</p> <p>3. Failure to affiliate with an extremist or other group (the individual experiences a failure or rejection from their desired terrorist or other group)</p> <p>4. Dependence on the virtual community (the use of social media and other online vectors to communicate with like-minded individuals)</p> <p>5. Thwarting of occupational goals (there is a setback or failure in the individual's academic or life pursuits)</p>	<p>Absent</p> <p>Absent</p> <p>Absent</p> <p>Present</p>	<p>KP was reported to have given up on his dream of serving in the military (Langman, 2016). This was in part thought to be related to his drop in academic grades and consistent behavioral incidents. In Fall 2013, he had received two F's and two D's across his six classes (Woodward & Goodrum, 2016). On Wednesday December 11, 2013, 2 days prior to the attack, KP was removed from Spanish class by the teacher (McCauley, n.d.). KP was sent home for the remainder of the day (McCauley, n.d.). KP's attack was driven by personal grievance rather than by adherence to any political, religious, or ideological belief system, and no evidence indicates that his planning or motivation was guided by an ideology that justified violence, thus not meeting the TRAP-18 definition for framed by an ideology. There is no evidence that KP attempted to affiliate with an extremist or other group.</p> <p>Evidence only indicates independent research, no dependence with virtual groups, and so forth.</p> <p>KP experienced significant setbacks to his aspiration of attending a military academy, including the closure of his application file, concerns that his suspension and declining grades damaged his eligibility, and statements reflecting perceived derailment of this goal, consistent with the TRAP-18 definition of thwarting of occupational goals. Further detail can be found below:</p> <p>KP was interested in both the U.S. Military Academy at West Point and the Air Force Academy [it is unclear which military school he was referring to here because some of the people who were interviewed referred to the "academy"] (Langman, 2016).</p> <p>According to statements from KP's mother, he started the application process for West Point but later "learned that his file had been closed because he had not been actively working on it." It is not publicly available, information on when this was. On 3 September 2013, a post was written by someone on his Facebook page which stated: "Hope your Academy application process is running smoothly." KP may have given up his aspiration of joining the military because of his disciplinary record and also his poor grades in his senior year. He also specifically discussed how his suspension ruined his chances (Langman, 2016).</p> <p>KP indicated to a peer that he believed his suspension would interfere with his goals of attending the Air Force Academy (Arapahoe County Sheriff's Office, n.d.-b, p. 987)</p>

(*table continues*)

Table 1 (*continued*)

TRAP-18 indicator	Coding (present, absent, unknown)	Coding justification
6. Changes in thinking and emotion (the individual's thinking patterns becomes absolute and simplistic)	Present	<p>KP exhibited increasingly rigid, absolutist, and grievance-saturated thinking that are reflected in his journal entries, escalating contempt toward others, and self-righteous framing of violence, indicating the cognitive and emotional simplicity described in the TRAP-18 definition of changes in thinking and emotion. Further detail can be found below:</p> <p>In the year leading up to the attack, KP's journal entries reflected increasingly intense and rigid viewpoints. He wrote deterministic and grievance-focused statements such as "words hurt, can mold sociopath, and lead someone a decade later to kill, (McCauley, n.d., p. 30)." and described himself as "a psychopath with a superiority complex (McCauley, n.d., p. 27)." His writings also indicated a growing sense of fatalism, including repeated references to his anticipated death and the inevitability of the planned attack. Reports from peers and teachers described him as increasingly angry, volatile, and unable to tolerate feedback, with outbursts that escalated beyond situational triggers (Langman, 2016). He expressed contempt toward multiple groups, including racial and religious minorities, and made statements reflecting disdain for peers and school staff (Arapahoe County Sheriff's Office, n.d.-b; Langman, 2016). There is evidence which suggests that KP experienced rejections from girls he was interested in (Langman, 2015). It was reported that during his freshman year, he was persistently pursuing the victim, Claire Davis, at a homecoming dance and had even followed her into the bathroom to continue asking her to dance after she told him no (Arapahoe County Sheriff's Office, n.d.-a, p. 1405). This behavior is consistent with the TRAP-18 definition for failure of sexually intimate pair bonding.</p> <p>Despite KP's journal entry alluding to mental challenges, there is no evidence that KP received a formal clinical diagnosis or met criteria for a major mental health disorder in available records, thus not meeting the TRAP-18 definition for mental disorder. Further detail can be found below:</p> <p>However, he admitted that he lied during his mental health evaluation. He wrote in his journal: "Monday, October 15, 2013, I had an interesting idea today. In first hour, I thought about shooting up the asylum or whatever the fuck it was that my mother took me for that psych evaluation. Let the records show I lied through my teeth through the test" (McCauley, n.d., p. 30).</p> <p>No evidence on any novel methods, tools, or strategies in planning or executing his attack (e.g., he used weapons not uncommon in such attacks).</p>
7. Failure of sexually intimate pair bonding (a failure to sexually or intimately bond with another person)	Present	
8. Mental disorder (historic or present major mental health disorder)	Absent	
9. Creativity and innovation (innovative terrorist actions/behavior(s) or processes which is imitated by others)	Absent	
10. Criminal violence (past criminal history)	Absent	<p>KP had no previous criminal charges. There were, however, a few occasions prior to the attack where he engaged in violence that is notable but did not escalate to criminal justice involvement. He hit two students with his lunchbox in November 2003. KP also kicked another student in the stomach and hit another student in the head in December 2003 (Woodward & Goodrum, 2016). These instances are not sufficient to meet the TRAP-18 definition of criminal violence.</p>

Note. TRAP-18 = Terrorist Radicalization Assessment Protocol-18; KP = Karl Pierson; NRA = National Rifle Association; NBK = Natural Born Killers; KMFDm = Kein Mehrheit Für Die Mitleid.

(i.e., reliability and validity) of the TRAP-18 with nonterroristic school-based shootings. It would also be valuable to include testing whether it can retroactively distinguish individuals who committed school shootings from comparison groups. Within the behavioral threat assessment context, grievance fueled violence may not be too dissimilar to cases of lone-actor or self-initiated terrorism.

The present case adds to a small but growing body of literature suggesting its potential broader relevance (Allely & Wicks, 2022). However, the tool does not address all risk factors relevant in school contexts, such as peer dynamics, family engagement, and academic decline, which are often included in school-specific protocols like the Comprehensive School Threat Assessment Guidelines (CSTAG; Cornell, 2018a). The absence of these factors may contribute to deficits in validity of the application of the TRAP-18 in the assessment of school-based nonterroristic violence as these risk factors may represent critical data points within a juvenile's life. With this, challenges within school-based threat assessment protocols continue to be identified by researchers suggesting value may be added through the integration of nonschool-based assessment tools.

Ross et al. (2022) conducted a systematic review of empirical threat assessment investigations to inform evidence-based practices for school threat assessment. Findings revealed that the primary threat assessment framework utilized by the sample was the Virginia School Threat Assessment Guidelines and the revised version, the Comprehensive School Threat Assessment Guidelines (CSTAG, Cornell, 2018b). However, school-based targeted violence assessments or tools may not necessarily be equipped to identify or interpret these pathway behaviors with the same degree of nuance as the TRAP-18. The TRAP-18 can also be integrated into broader investigative processes (e.g., intelligence gathering, case management). School-based assessments, on the other hand, are focused specifically on the educational environment and may lack emphasis on coordination with external agencies.

As also stated by Ross et al. (2022), based on the findings from their systematic review of empirical threat assessment investigations to inform evidence-based practices for school threat assessment: "there was minimal evidence of implementation fidelity of the threat assessment frameworks, highlighting the need for fidelity

measures to evaluate threat assessment implementation in schools" (p. 444). This finding appears relevant in the case of the Arapahoe High School attack, in which official case documents revealed systemic issues regarding the school's threat assessment process. Horgan et al. (2024) also outlined a number of strategies that can be used in order to mitigate the threat of targeted school violence. For instance, they explored opportunities which can assist school personnel identify, assess, and manage threats of violent extremism. Horgan and colleagues also explore a number of ways in which school psychologists can increase awareness and help bring about individual and systemic changes to prevent violent extremism in schools (Horgan et al., 2024).

Systemic and Procedural Considerations

The 2013 school-based threat assessment concluded that KP posed a "low level" of concern and did not initiate ongoing monitoring or follow up. Subsequent reviews highlighted systemic shortcomings, including limited experience among staff, insufficient information-sharing, and the absence of a designated coordinator to collate risk information across sources in the case of KP (Kanan et al., 2016; Woodward & Goodrum, 2016). These structural gaps illustrate that even when concerning behaviors are recognized, their significance may be underestimated without a structured framework to guide decision-making.

The application of TRAP-18 to this case also underscores challenges in how threat assessments are conducted in educational settings and SPJ tools like the TRAP-18 may help fill this gap by formalizing how warning signs are coded, reducing reliance on subjective judgment, and encouraging active management when proximal indicators are present (Meloy & Genzman, 2016). However, SPJ tools are not a substitute for systemic capacity. Effective threat management still requires multidisciplinary teams, information-sharing protocols, and ongoing case monitoring (National Threat Assessment Center, 2024). Additional research is needed to evaluate the efficacy of school-based threat assessment protocols to determine whether the integration of nonschool context tools, such as the TRAP-18, would support increased identification and management of individuals at risk of targeted violence.

Implications for Prevention

The case demonstrates that structured tools can contribute to violence prevention efforts by providing consistency, guidance, and transparency in assessing concerning behavior. The TRAP-18 offers a framework that may reduce the likelihood of prematurely downplaying threats when risk indicators cluster together. With this, caution remains warranted. The tool was not designed for adolescents or school-based cases and more research is required to evaluate its validity and reliability in these populations. Future studies could examine its application across multiple school cases and compare outcomes with established school-specific protocols.

Practical and Clinical Implications

The retroactive application of the TRAP-18 to this case underscores several lessons for the practice of behavioral threat assessment. First, SPJ tools can provide consistency, guidance and transparency when evaluating concerning behaviors. In this case, multiple proximal warning behaviors and distal characteristics were identifiable through the TRAP-18 tool. Had such a structured process been employed in real time, it may have supported a more accurate classification of concern and encouraged active case management. Additionally, SPJs such as the TRAP-18 should not be used in isolation. Effective threat management requires a multi-disciplinary team process that includes a wide breadth of experience such as mental health professionals, educators, law enforcement, and administrators (National Threat Assessment Center, 2024). Tools such as the TRAP-18 can serve as a guide for structuring observations and assessments, but information-sharing protocols, team training, and ongoing monitoring remain critical to ensuring meaningful identification, assessment and intervention of individuals of concern.

This particular case highlights the risk of over-reliance on categorical threat assessment outcomes (e.g., “low,” “medium,” or “high” levels of concern). Broad classifications risk obscuring nuanced risk factors and have the potential to contribute to missed opportunities for early intervention or follow up. SPJ tools provide item-level coding that can highlight specific areas of concern, such as fixation, pathway

behaviors, or mood disturbance, which can help to guide tailored interviews and interventions (Meloy & Genzman, 2016).

While the TRAP-18 was designed for adult lone-actor terrorism cases, its potential applicability to adolescents appears initially promising. However, certain factors central to adolescence such as developmental considerations, school context, and family dynamics, are not included and may result in false negatives. This alone presents a large concern that should be factored into ultimate decisions around utility in school-based settings. Additionally, the TRAP-18’s terrorism-focused language may be inaccessible or even off-putting for school-based professionals, resulting in less willingness to utilize the tool over other SPJs that were specifically designed for a school setting. Ultimately, additional research is needed to determine whether the TRAP-18 can be reliably adapted for use with adolescents or whether its principles should be selectively integrated into school-specific protocols such as the Comprehensive School Threat Assessment Guidelines (CSTAG; Cornell, 2018a).

Conclusion

This case study applied the TRAP-18 retroactively to the perpetrator of the Arapahoe High School Attack in 2013. The analysis identified six proximal warning behaviors (pathway, fixation, identification, energy burst, leakage, and last resort) and four distal characteristics (personal grievance and moral outrage, thwarting of occupational goals, changes in thinking and emotion, and failure of sexually intimate pair bonding) that were present for the perpetrator. This case study suggests the TRAP-18 may represent a useful and potentially effective tool in school shooting threat assessments.

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