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Personality Patterns of Students Who Make a Threat of Targeted School Violence

Tawnya Michelle Ayim

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PERSONALITY PATTERNS OF STUDENTS WHO MAKE A THREAT OF TARGETED SCHOOL VIOLENCE

By

Tawnya Michelle Ayim

Bachelor of Arts—Sociology

Vanguard University of Southern California

2005

Master of Science –Educational Psychology

University of Nevada, Las Vegas

2007

Specialist in Education – Educational Psychology

University of Nevada, Las Vegas

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Tawnya Michelle Ayim

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Department of Educational Psychology and Higher Education

Scott Loe, Ph.D.
Examination Committee Chair

Katherine Lee, Ph.D.
Examination Committee Member

Stephanie Relles, Ph.D.
Examination Committee Member

Joseph Morgan, Ph.D.
Graduate College Faculty Representative

Kathryn Hausbeck Korgan, Ph.D.
Graduate College Interim Dean

ABSTRACT

Although school shootings date back to the 1760's (Dixon, 2005), recent attacks at schools in our country have raised awareness of school violence. This study investigates how students from one large school district responded to the personality pattern items on the Millon Adolescent Clinical Inventory, Second Edition after having made a threat to harm another student or staff member. Personality patterns were investigated in the overall sample, as well as within groups designated to be at a Low/Moderate risk level and High/Imminent risk level following a threat assessment. The minimal Differences between the sample for the current study and the secret service study on school shootings are discussed. The severity of the personality profiles for low/moderate risk level and high/imminent risk level groups are examined. Statistical analysis shows that the behavioral presentation between the groups is more severe in the High/Imminent group than the Low/Moderate group overall. Imminent and high risk cases showed an elevated presence of pathology on the following personality profiles: introversive-schizoid, inhibited-avoidant, doleful-depressive, Unruly-Antisocial, Oppositional-negativistic. Low and Moderate risk cases showed an elevated presence of pathology on the following personality profiles: submissive-dependent and conforming-compulsive.

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CHAPTER ONE

Although school shootings date back to the 1760's (Dixon, 2005), recent attacks at schools in our country have raised awareness of school violence. The Columbine massacre, Sandy Hook Elementary tragedy, and the 36 school shootings that occurred between them (School Shooting Statistics, n.d.), have resulted in heightened vigilance by school staff, parents, and students alike. The overall risk of a school attack occurring is very low according to findings of the Secret Service report for the Safe School Initiatives. For example, the odds that a child would die in a school by homicide or suicide during the years of 1993 to 1997 were no greater than 1 in 1 million. In June 2014, the National Center for Education statistics released a report stating that a total of 25 homicides and 6 suicides occurred on a school campus during the 2010-2011 school year (http://nces.ed.gov/programs/crimeindicators/crimeindicators2013/key.asp). Even though the risk of falling victim to a school attack is extremely rare, it can occur at any level of education. School attacks have occurred at elementary schools (the Amish school shootings in Lancaster County, Pennsylvania, 2006; Sandy Hook Elementary School shooting, Newtown, Connecticut, 2012), middle schools (West Side Middle School, Jonesboro, Arkansas, 1998; Reno, Nevada, 2014), high schools (Columbine High School, Littleton, Colorado, 1999; Reynolds High School shooting in Toutdale, Oregon, 2014), and universities (Virginia Tech, 2008; Isla Vista Shootings near the University of California Santa Barbara, 2014). Training and education on threat assessment is imperative for school administrators, staff, and students. Having a plan to manage a potential threat or attack against a school campus can save lives. Many of the tragic school attacks that have occurred throughout history could very well have been prevented, had a system for reporting and addressing potential threats been in place.

Threat assessment is defined as "a process of evaluating a threat and the circumstances surrounding the threat, to uncover any facts or evidence that indicate that the threat is likely to be carried out." (Cornell, Sheras, Gregory, Fan, 2009). Much of the existing research on threat assessment and school violence was conducted after school attacks occurred, offering a hindsight perspective on what led up to a school attack. A missing link in the literature is the focus on students who have expressed a desire to engage in a school attack but have not yet executed their plan. The present study addresses this gap in the research by placing the emphasis on the personality patterns present in students who pose a risk of targeted violence.

PURPOSE OF THE STUDY

The present study aims to fill a void in the existing literature by studying personality patterns within a population of students referred for a threat assessment, for the purpose of creating interventions at the tier 1 level to mitigate circumstances that may lead to a threat of targeted school violence. This study investigates how students from one large school district responded to the personality pattern items on the Millon Adolescent Clinical Inventory, Second Edition, (MACI 2) (Millon, Millon, Davis, Grossman, 2006. NCS Pearson Inc.) after having made a threat to harm another student or staff member. The MACI 2 is a self-report inventory that specifically assesses adolescent personality characteristics and clinical syndromes. This inventory was developed for use in clinical, residential and correctional settings, to evaluate troubled youth, develop an appropriate diagnosis and an effective treatment plan.

In the present study, personality patterns were investigated in the overall sample, as well as within groups designated to be at a Low/Moderate risk level and High/Imminent risk level following a threat assessment. The purpose of this analysis is to learn if there are salient differences in personality patterns when the cases are separated by risk level. This will help

school psychologist and other professionals completing threat assessments to identify students who pose a risk of targeted violence. This study will also aid in the effort to identify areas in which school staff and mental health professionals can implement interventions to mitigate circumstances that could develop in a threat of targeted school violence.

STATEMENT OF THE PROBLEM

Because of potential school violence, more schools and school districts are implementing formal procedures for addressing mental health concerns and potential threats. Research has shown that the successful implementation of a threat assessment model has enabled schools to remain a safe haven for students and staff. One study found that 94 % of administrators in one school district that followed a multi-dimensional threat assessment team approach reported that school safety was significantly improved since threats were effectively identified and investigated (Barton, 2008). Another study found that when the Virginia threat assessment model was implemented in Memphis City Schools a decrease was observed in long term suspensions and potential threats were sorted out at the school building level, often leading to mental health treatment for the students who made a threat (Strong and Cornell, 2008).

According to the results of the National Comorbidity Study- Adolescent Supplement (NCS-A), the lifetime prevalence for *any* mental disorder is 46.3% and 21.4% for a *severe* mental disorder (Merikangas et al, 2010). This means that 46.3 % of all adolescents will be diagnosed with a mental disorder in their lifetime. Additionally, 21.4% will be diagnosed with a severe mental disorder in their lifetime. However, the Secret Service Final Report (2004) and Findings of the Safe School Initiative (2002) found that 34% of school attackers had received a mental health evaluation and 17% had a documented mental health or behavior disorder

diagnosis preceding the attack. These statistics suggest that students who have engaged in a school attack are less likely than the general population of adolescents to have a mental disorder.

Research is not available on personality patterns in school attackers, so an exact comparison with prevalence of personality patterns in the general population of adolescents is unavailable at this time. Having limited empirically based data available on students who have posed a threat but have yet to carry it out limits our ability as school psychologists to identify potential risks of violence and the troubled youth that may pose a risk.

SIGNIFICANCE OF THE PROBLEM

As noted above, only 17% of the students who committed a targeted act of school violence in the Secret Service study has an identified psychological disorder. While most perpetrators of school violence did not have a documented mental illness, 78% had a documented history of suicidality and suicide attempts before the attack occurred, indicating the perpetrators may have been reaching the end of their ability to cope with their psychic pain. Further, the Secret Service (2002) reports evidence exists that 61 % of perpetrators of school violence exhibited symptoms of extreme depression and feelings of desperation. This points to the importance of an effective threat assessment process. Conducting a thorough threat assessment helps schools identify students who are suffering but have yet to be identified. The practice of threat assessment is aimed at identifying individuals who have made a threat and to decipher which risk factors of previous attackers are present.

RESEARCH QUESTIONS

The following are the research questions that are explored in the present study:

1. What are the demographic characteristics of students referred for threat assessment?

2. Which personality profiles are more severe when comparing the Imminent/High Risk group and the Moderate/Low Risk group?

3. Which personality profiles have average BR scores on the MACI 2 above 60 in imminent and high level of risk cases?

4. Which personality profiles have average BR scores on the MACI 2 above 60 in the low and moderate level of risk cases?

HYPOTHESES

1. There will be no significant differences between the threat risk level groups based on demographic data.

2. The demographic data of students who were administered a MACI 2 as a part of a threat assessment will align with the demographic data of the individuals included in the secret service study on threat assessment.

3. The Imminent/High Risk group will have higher average BR scores than the Moderate/Low Risk group.

4. The Imminent/High risk level group will yield average BR scores that indicate at least a possible presence of the trait at the domain level (min BR of 60) in a distinct pattern.

5. The Moderate/Low risk level groups will yield average BR scores that indicate at least a possible presence of the trait at the domain level (min BR of 60) in a distinct pattern.

NATURE OF THE STUDY

Research questions were investigated using a causal-comparative design involving a convenience sample selected from a database of students who were referred for threat assessment in a large, urban school district in the southwestern United States. The district's threat assessment team evaluated threat risk level for each student using individual assessments, which included MACI 2 scores, and classified each student's threat risk as Low/Moderate or High/Imminent. Multiple variables, including demographic characteristics and MACI 2 personality profile scores, were examined within and between groups. Within groups analyses identified elevated MACI 2 personality profiles for each risk level group. Personality profiles that were above 65 were identified and analyzed. Between groups analyses examined differences in demographic variables and MACI 2 scores. Demographic differences were explored by using appropriate descriptive statistics. MACI 2 profile differences were examined using Repeated Measures Analysis of Variance (ANOVA).

ASSUMPTIONS

Multiple assumptions are made in the present study. First, it is assumed that the MACI 2 was administered with fidelity to the test guidelines and procedures. Second, it is assumed that the data was entered completely and correctly when the items were scored on the computer scoring software. Third, it is assumed that the validity scales detected discrepancies if the students completing the assessment were not being honest. Last, it is assumed that the psychologists and counselors that conducted the threat assessment adhered to threat assessment protocol procedures.

LIMITATIONS

Data used in the present study was limited to those administered the MACI 2 during the course of a threat assessment. Each threat assessment included an individualized battery of standardized psychoeducational and psychological assessments. Data from the assessments were used in in conjunction with presenting issues and the student's historical data to determine the level of risk present that the student would carry out the targeted act of violence for which they were referred. This is not a study of all students who voiced a threat of targeted violence. It focuses on those who were administered the MACI 2 during the threat assessment process.

Students who did not warrant an assessment of the MACI 2's level of clinical analysis were excluded from the present study. The decision to administer the MACI 2 was made by the clinician. Students who did not present with clinical symptoms of personality dysfunction or psychopathy were not administered the MACI 2 during the threat assessment. This is consistent with the intentions and use of the assessment. The norming sample for the assessment was comprised of a clinical sample, making it an inappropriate assessment for adolescents who do not appear to be presenting with possible personality dysfunction or psychopathy (Millon, T., Tringone, R., Millon, C., Grossman, S, 2005).

This study investigated how students from one large school district responded to the personality pattern items on the MACI 2 after having made a threat to harm another student or staff member. The data is not generalizable to adult perpetrators of school violence.

DELIMITATIONS

The present study is delimited to students who age 13-18 years, due to the age requirements of the MACI 2. This is supported by research that states that students in the age span of 13-18 are the most common perpetrators of school violence (Vossekuil et al, 2002). The data is from students attending public schools in a large urban school district. The data used were made available by the school district's crisis response team records. Only data from students who had made a threat and were administered the MACI 2 were included in the data.

IMPLICATIONS FOR SCHOOL PSYCHOLOGISTS

Because of their broad training and abilities, school psychologists are able to be on the forefront of helping schools prevent attacks by assisting or leading threat assessments, in addition to helping address school related mental health concerns. School psychologists possess specific training that equips them to be involved in threat assessment (O'Donnell & Dunlap, 2014; Perfect & Morris, 2011). Demands in the school environment can include "cognitive, academic and social–emotional assessment; consultation; in-service education; crisis intervention; counseling/therapy; and program evaluation/research." (Perfect & Morris, 2011).

This study hopes to highlight an imperative area of training that could and should be offered in school psychology training programs. National Association of School Psychologists (NASP) Standard 5.2 requires NASP approved programs to equip graduates with knowledge on principals and research related to "evidence based strategies for effective crisis response". NASP also requires graduates to demonstrate skills to implement effective crisis preparation, response, and recovery (2010 NASP Standards, 2010). Having specific coursework in training programs would be an effective manner to impart this important knowledge.

Understanding what developing personality patterns are common in students who have made a threat may help school psychologists identify students that are at risk for continuing down a Pathway to Violence (Calhoun & Weston, 2004) and avert their course toward more healthy choices. The present study aims to elucidate and study personality patterns among students who have been referred for at threat assessment due to potential harm to others. When concerns of mental health nature arise on a school campus, school administrators look to the school psychologist for assistance. Possessing knowledge of threat assessment, especially prevalent personality patterns among students who pose a risk of targeted school violence, would bode well for the school psychologist when they are called upon to help in such situations.

CHAPTER TWO
LITERATURE REVIEW

The literature that exists related to the topic of targeted violence in schools tends to focus on students who have already committed an act of violence (Cornell, 2003; Gongalves, 2009; Olson, 2009; Matsumoso & Hwang, 2014). The research community has produced work on managing the risk of school violence (Mohandie, 2000; Wanko, 2001) and preventing school violence (Shafii & Shafii, 2001; Daniels et al, 2010). There is also research investigating common characteristics of school shooters (Langman, 2009), antisocial youth (Gentle-Genitty, 2010) boys who are violent (Minden, 2000; Watson, 2007) and girls who are violent (Alder & Worrall, 2004; Stefurak & Calhoun, 2004; Chesney-Lind, 2008). However, research on students who have made a threat, but have not yet carried it out is missing in the literature.

THREAT ASSESSMENT VS. RISK ASSESSMENT

Threat assessment is defined as "a process of evaluating a threat and the circumstances surrounding the threat, to uncover any facts or evidence that indicate that the threat is likely to be carried out." (Cornell, Sheras, Gregory, Fan, 2009). Many school districts that have a threat assessment team base their protocol on the Secret Service finding of The Safe School Initiative (2002) and the accompanying guide released in 2004 entitled "Threat Assessment in the Schools." Other school districts use the Virginia threat assessment guidelines (Cornell & Sheras, 2006) when creating their threat assessment procedures (Strong & Cornell, 2008).

The study and practice of threat assessment overlaps with similar fields such as risk assessment, however, it must be differentiated. Meloy, Hart, and Hoffman (2014) point out several distinctions between threat and risk assessment. Risk assessment, sometimes called generalized violence risk assessment, assesses one's propensity to engage in violent behavior in

general, at an unspecified time and nature, without a specific target. Threat assessment, by contrast, assesses the risk present related to a specific threat, of a specific nature, during specific time frame, with a specific target. Threat assessment utilizes dynamic (instead of static) factors. Risk assessment, by comparison, usually occurs within institutional settings (hospital, jail). Evaluators tend to have more time to collect the data, and the intention is for the results to be used in legal or clinical settings at a later time. Threat assessment utilizes the facts present at the time of the assessment. The determination made by the threat assessment team can change, as the details often change through the course of the assessment. Flexible and creative strategies are required in threat assessment because of the emphasis on management and prevention of an act of violence (Mohandie, 2013, cited in Mrad, Hanigan, &Batemen, 2014).

Recent research has revealed that most school attackers leak information about the impending violence (Stover, 2005, Twemlow et al, 2002; Meloy & O'Toole, 2011). The Secret Service reports that 81% of school attackers made at least one person aware of their lethal intentions and 59% made more than one person aware (Vossekuil et al, 2002). Threat assessment procedures are designed to provide a reliable procedure allowing those made aware of violent intent to safely and effectively make a report and initiate protective action. If a student learns information about an impending attack and does not inform the authorities, an attack may occur when it could have been stopped.

THREAT ASSESSMENT MODELS

Secret Service Threat Assessment in the Schools

The Threat Assessment guide created by the Secret Service in 2004 is based on the 2002 report on school shootings. This seminal threat assessment guide has been cited extensively in research focusing on threat assessment. Williams and Cornell (2008) cite the Secret Service

report (2002) in their study of middle school students' willingness to seek help when faced with the threat of targeted school violence. Greene (2005) employs the Secret Service (2002) report as the main source on what a threat assessment entails in his study on strategies for reducing school based violence. Ferguson (2008) cites the Secret Service report in his description of research on characteristics of school shooters in his study on the link between violent video games and students who pose a risk of targeted school violence.

The guide generated 11 questions to guide schools in assessing the risk present when a threat is made. The questions are listed and discussed below (Vossekuil et al, 2002).

1. What are the student's motives or goals?

    The student in question is under scrutiny because some comment or behavior he/she has engaged in has caused someone concern. The threat assessment team must determine the student's source of motivation for making the threating statement or engaging in the concerning behavior. Consideration should be given to the current status of the source of motivation, and if the situation/circumstances still exist and persist.

    If a grievance is being sustained, the subject of the grievance must be determined and protected. The motive for 34 % of school attackers studied by the Secret Service was attempting to solve a problem. It would be prudent for the threat assessment team to first identify the problem the student is attempting to solve. Then it is prudent find out what, if any, efforts have been made to resolve the problem and if the potential attacker is able to identify any alternatives. The lack of ability to identify or use a non-violent solution to solve a problem is indicative of the potential for higher risk level. The mentality of seeing no other way out is dangerous, and also places the student at a higher risk for suicidal ideation as well.

2. Have there been any communications suggesting ideas or intent to attack?

The method, frequency, and content of any communications related to intent to attack should be examined as closely as possible. Perpetrators of school violence have communicated their ideas in a myriad of ways including writing in a journal, making posts on social media sites, verbal conversations with peers, family, and staff members.

Communications with friends of the potential attacker should be investigated. In many cases, school attackers have given a warning to preferred peers, so the friends will avoid being hurt in the attack. Many school attackers have attempted to recruit friends to participate in the attack as well. Friends and acquaintances should be chosen carefully and discretely interviewed for any leaked knowledge of the possible threat posed.

3. Has the subject shown inappropriate interest in school attacks or attackers, weapons, or incidents of mass violence?

Students who are referred for a threat assessment who have researched topics related to school attacks, weapons or incidents of mass violence should be questioned about their interest in the topic. Study of violent topics may be a part of a school assignment, but the choice of the topic of school attack or mass violence should be questioned. If the threatening content was discovered because it was a part of a school project, the teacher of the class for which the assignment was given should be interviewed to determine how the topic was chosen.

Many boys have an interest in weaponry and play games that employ fantasy versions of weapons. However, it would be wise for the threat assessment team to inquire about interest in weapons when the student appears to have difficulty letting go of the topic or changing

subjects. The tendency to perseverate on weapons, school attacks or mass violence is concerning, especially in light of the tendency for perpetrators of school violence to disengage with peers. Lack of healthy contact with peers combined with excessive amounts of time concentrating on violent topics fertilizes existing desire to bring harm to others.

4. Has the student engaged in attack-related behaviors?

Attack related behaviors can include developing a plan for the intended attack. Plans created by students who pose a serious risk of engaging in an attack are different than simply making impulsive statements about hurting or killing people. The plans sustained by high risk students are detailed and well thought out. The Secret Service found that 95 % of school attackers had developed their idea to harm targeted people in advance and 51 % had spent at least a month planning the attack.

Access to weapons can, and should, be assessed through a registered weapons check through the police department. Threat assessment teams should also ask the student of concern and his/her family about access to weapons. The family should be asked about access to weapons instead of relying on the police department's weapons check because weapons are not always registered properly, and weapons can be available at friends', family members' or acquaintances' residences. Any evidence of the potential attacker's efforts to obtain weapons is noteworthy. The desire to obtain weapons should be assessed also. Students who are in the earlier stages of planning an attack may possess a desire to obtain weapons but may not have obtained them yet.

Any information about practice or rehearsing that may be taking place in preparation for the intended attack is salient to the threat assessment. Common research for intended attacks

tends to include casing locations for the attack, in an attempt to find the preferred location for the violence to occur.

5. Does the student have the capacity to carry out an act of targeted violence?

Capacity is assessed in different ways. First, the student's intelligence, reasoning, and organized thinking/behavior necessary to carry out a targeted act of violence needs to be determined. If the student receives special education services, the confidential file containing psychoeducational assessments can be reviewed for data related to the student's capacity. If the student does not receive special education services, grades in school or outside assessments provided by the student's family can serve as measures of capacity. Administering an assessment of capacity during the process of the threat assessment may be the best option for a threat assessment team to determine if the student possesses the capacity to plan and carry out an act of targeted violence.

Second, the threat assessment should assess the student's capacity in terms of access to weapons and equipment needed to carry out the attack. If the student has begun to collect the weaponry and assistance necessary to carry out the intended attack the threat risk level is going to increase greatly.

6. Is the student experiencing hopelessness, desperation and/or despair?

Throughout the threat assessment the team should attempt to uncover any sentiment that the situation will not and cannot get better for the student. Potential perpetrators of school violence who have no positive sense about how the future will turn out for them have no reason to try non–violent methods of getting what they desire. The depths of the student's suffering should be assessed, to learn of the level despair he/she is experiencing. Any suicidal

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ideation that is discovered during the threat assessment process should be noted and addressed immediately.

7. Does the student have a trusting relationship with at least one responsible adult?

A sense of belonging is a powerful deterrent of violent behavior. The threat assessment team should make attempts to learn if the student of concern has any connection with at least one trusted adult. How emotionally connected or disconnected the student is to other students will play a significant role in the threat assessment. Connectedness is a deterrent to the risk of self-harm as well as the risk of harming others.

The presence of recent real or perceived failures, losses or situations that resulted in a loss of status should be assessed during interviews with the student, parents, and school staff. Records review can also lend to this data gathering. Some examples of recent a failure/loss might include earning a failing grade, not being selected for a sports team, being rejected by a romantic or a social interest.

8. Does the student see violence as an acceptable or desirable or the only way to solve problems?

Threat assessment teams should consider if the student is in an environment that implicitly or explicitly endorses violent as a preferred means of solving problems. During the parent interview the family principles related to the use of violence should be assessed. In some situations, students have been dared or encouraged by peers to engage in a violent act. Beliefs of students who have engaged in school attacks are typified by the belief that there is no other way out, there is, nothing to lose and violence is the only way to end their pain. This unhealthy dynamic should be investigated as much as possible.

9. Is the student's conversation and "story" consistent with his or her actions?

It is important to watch for inconsistencies between the student's statements and his/her actions. Incongruous behavior is indicative of dishonesty and raises the concern level. Consistency between the student's report and his/her demeanor should also be taken into account when deciding the risk level and planning the action plan. Reading nonverbal cues will be a powerful skill for threat assessment team members. The question that should be asked is, "Does the effect of the student in question match his/her report of intentions and actions?" The behavior observed during discovery of the threat is revealing. The absence of remorse, defensiveness, agitation, blaming others, a sense of justification are all factors that would increase the level of risk.

10. Are other people concerned about the student's potential for violence?

Assessing other's concern about the student's violent potential is more than assessing for social popularity. During the witness and school staff interviews it is important to take note of any students or school staff members who may report uneasy feelings related to the potential attacker's character and behavior. Special consideration should be given to any rapid and recent changes in daily functioning, behavior or affect that have taken place. Concerns expressed by peers and school staff members should be focused on safety related concerns and rapid changes or deterioration in behavior. The sentiment that the student that poses a threat is simply odd or abnormal is not enough to warrant a true fear for the safety of the school campus. Awkwardness does not predict future violence.

11. What circumstances might affect the likelihood of an attack?

Situational factors that are impacting for the potential school attacker are salient to the threat assessment. The perception of the current circumstances of the student in question should be the focus of understanding. It is important for the threat assessment team to acknowledge that the potential school attacker's perception of undesired circumstances can be skewed from reality and the perception of those around him/her. Comparing the student in question's account of events with corroborated facts can illuminate discrepancies in the student's story and make life-saving facts known. Calhoun and West's (2004) work points out that circumstances and context are salient factors in threat assessment. The context within which the threat was made is essential data. Assessing the context of the threat enables the threat assessment team to determine if the threat was made during an emotional outburst and was not indicative of a true desire to harm others.

The Virginia Student Threat Assessment Model

Dr. Dewey Cornell at the University of Virginia has made a career out of methodology for conducting threat assessments. He is the primary researcher behind the Virginia Student Threat Assessment Model. According to the Youth Violence Project on the University of Virginia more than 3,000 schools in 18 states use the Virginia threat assessment method (Project Threat Assessment, n.d.). The method has been tested by multiple studies demonstrating its effectiveness (Cornell et al, 2004; Kaplan & Cornell, 2005; Strong & Cornell, 2008; Cornell, Sheras, Gregory, Fan, 2009, Cornell, 2011) and has been listed in the National Registry of Evidence-Based Programs.

As reflected in the decision tree in Appendix A there are up to seven steps involved in the Virginia threat assessment model. The first three steps are meant to triage the threat. After the

threat is reported to school administration, the basic information is evaluated, determining the specific details of what happened when the threat was made or discovered. In order to accomplish this, the student who made the threat as well as any witnesses are interviewed, and information is recorded in writing. The circumstances surrounding the threat's occurrence is considered as a measure of intention, once substantiated by further corroborating evidence.

After the triage of the threat is completed, a decision is made determining if the evidence present is sufficient to deem the threat transient or substantive. Specific criteria for each type of threat are taken into account in addition to the student's age, credibility and discipline history. A transient threat is a threat that has been determined by the threat assessment team is able to be handled through discipline and counseling resources. A transient threat is typically the result of an emotional outburst. In order to be deemed transient, the potential perpetrator of the threat must not have engaged in any efforts to carry out the threat. If the threat is deemed transient, step 3 is engaged in which the student who made a threat is issued disciplinary action, in conjunction with possible required counseling.

When a threat has been deemed substantive, the threat assessment team has identified enough risk factors and facts that the student in question has taken steps to carry out the threat to warrant further investigation. Consequently, the threat requires further analysis, more aggressive protection for potential victims, and more serious intervention for the student who poses a threat.

Once the threat is considered substantive, the threat assessment progresses to step 4 and the orientation of action taken is in management and prevention of the attack. If the student in question persists in their desire to carry out the threat but the threat is limited to "beating up" the potential victim immediate precautions are taken to protect the child that may be harmed. Parents of the potential victim as well as the student who made the threat are notified. Law enforcement

can be contacted, and discipline may be issued by school administration. If the threating communication involves using a weapon, death, rape or inflicting serious physical harm more severe steps are taken to contain and prevent the threat from occurring. Step 7 involves staying in contact with the student who made the threat and creating a safety plan to further contain the risk and provide assistance to the student who made the threat.

In order to support the use of the Virginia threat assessment model Cornell et al (2004) conducted a field test study of the model effectiveness included 35 public schools containing over 16,000 students. Using Cornell's model, school-based threat assessment teams assessed 188 cases, 70 % of the referrals were able to be labeled as transient threats, leaving 30 % labeled at substantive, requiring further assessment and intervention. In 2005 Kaplan and Cornell replicated the 2004 study but included more special education eligible students in the sample. Kaplan and Cornell (2005) found that overall students who receive special education services not only made more threats, but the threats made were more severe.

Strong and Cornell (2008) conducted a study in public schools in one of the nation's largest school districts, Memphis City School. Their study examined 209 referrals for a threat assessment and found that use of the Virginia student threat assessment guidelines resulted in far fewer long term suspensions, and only a handful of expulsions. Instead of missing school, plans to address underlying behavior included augmentations to special education plans, the addition of behavioral and academic supports for the students of concern, referrals to the community for counseling and mental health services. The present study analyzes data from cases referred to a threat assessment team that takes a similar approach, assessing the risk of targeted violence present, then offering supports to help deter the student from progressing down the pathway to violence.

Each of the studies conducted by Cornell and his colleagues are informative and add valuable information to the research about the efficacy of the Virginia student threat assessment guidelines. However, none of the studies focus on the personality patterns (or other key characteristics) within this population of students who pose a risk of targeted violence but have not yet executed an attack. The present study aims to fill the gap in the research.

Meloy's Contribution to Threat Assessment

J. Reid Meloy's research (Meloy, Hart, & Hoffman, 2014; Meloy, Hoffman, Guildimann, & James, 2011; Meloy & O'Toole, 2011) differentiates between two psychologically distinctive modes of violence: affective and predatory. Affective violence can be addressed as general violence, while predatory can be regarded as targeted violence. Affective aggressive accts are impulsive, unplanned and aim to reduce a perceived immediate risk hazard of abandonment or rejection. Predatory aggression is "cold blooded", characterized by premeditation, control, intentional action. The goal of predatory aggression is to establish power, or dominance, and obtain revenge and notoriety.

Meloy outlines his model for threat assessment in his book, "Violence risk and Threat Assessment: A Practical Guide for Metal Health and Criminal Justice Professionals" (2000). His biopsychosocial model contains 18 risk factors in three domains. Individual/Psychological Domain contains the following risk factors: male gender; age 15-24; past history of violence: frequency, recency, severity; paranoia; intelligence (low cognitive ability is most common for affective violence; higher cognitive ability is most common for predatory violence); anger problems (frequency, recency, severity); psychopathy and other attachment problems.

Social/Environmental Domain contains the following risk factors: family of origin violence; adolescent peer group violence; economic instability or poverty; weapons history (skill, interest, approach behavior); victim pool; alcohol and/or psychostimulant use; popular culture.

Biological Domain contains the following risk factors: history of central nervous system trauma; central nervous system signs and symptoms; objective central nervous system measures; major mental disorder.

The threat assessment model proposed by Meloy has application guidelines. Assessing the student in question on all risk factors specified by the model is recommended. While this does not allow for a simple addition calculation to determine a threat risk level, it does allow the threat assessment team to support the assessment outcome on data driven research. When deciding on a level of risk, the domains are weighted relative to the severity of the risk factor as well as the dynamic or static nature of the risk factor. Risk factors that are not able to be decreased through treatment or intervention (static) will impact the level of risk assigned to the threat more so than risk factors that can be addressed through preventative measures (dynamic).

Meloy cites Hoffman and Roshdi's (2013) work that established a four-stage pathway model of severe targeted violence in schools. This model builds on Weston and Calhoun's (2003) Pathway to Violence, which focused primarily on external factors exhibited by the perpetrator. The Pathway Model proposed by Hoffman and Rashdi (2013) addresses the internal state as well as the observable behavior that is expressed by the perpetrator.

COMMUNICATING THREAT RISK LEVEL

At the conclusion of a threat assessment a report is typically written to document and summarize the data collected and the decisions made based on the salient information available at the time of the assessment. At the conclusion of the report the level of risk of a targeted attack occurring is stated and described. The risk level informs the action plan that establishes concurrent, but individually designed interventions.

Research on communicating risk levels, as opposed to violence prediction is a fairly new approach (Monahan & Stedman, 1996). Kirk Heilbrun and his counterparts (2000) have described risk communication as "the link between risk assessment and decision making about risk." Heilburn's work (Heilbrun, 1997; Heilburn et al., 2004) assessed clinicians' preferences concerning the form of risk communication, identifying descriptive, prediction-oriented, and management-oriented as being the three most common.

Descriptive risk communication places the primary concentration on identifying risk factors present but does not expand any further or make any inference about the chance of future behavior. As the name implies, the descriptive risk form of communication simply describes and does not predict or call for any specific future action. The result allows the clinician to avoid overstepping their bounds, but also provides limited satisfaction to the reader in that there is no clearly stated conclusion (Borum & Verhaagen, 2006).

Predictive-oriented risk communication, used primarily in forensic and clinical settings (Borum, 2006), make a concrete statement concerning likelihood of future violence. This can be communicated in percentages (55% likelihood), categorical terms (Student A is dangerous), or using relative descriptors (low risk, moderate risk, high risk).

Management-oriented or Risk reduction forms of communication underscore risk assessment and management. This method has cohesive roles, as the desired outcome of any risk assessment is to lessen the risk and deter violence from occurring. Some research. The exact probability is not hypothesized. The clinician makes "highly context-bound conditional judgments pertaining to the managing (pg. 136)" of the risk, specifying factors that impact the risk, the conditions that impact the risk and the clinical relevance of the events that may have an influence on the risk present. In order to be able to lessen the risk, the risk factors and conditions need to be measurable and able to change over time.

The risk communication methods described above are taken from studies that are surveying clinician opinion on communication risk levels in a generalized sense, as opposed to targeted violence. Communicating risk of targeted violence is different because the clinician writing the threat assessment report is assessing the risk of a specific event, instead of the risk that the student may engage in a violent act in any form. Meloy, Hoffman, Guildimann and James (2011) address communicating threat risk level specifically. They assert that the threat risk level is not an estimation of the probability that the student will engage in an act of school violence. Instead, the threat risk level communicates the extent to which the student shares characteristics of those who have committed a targeted act of school. The assignment of a threat risk level makes a statement about how similar the potential attacker is to students who have engaged in a school attack.

The method used by the threat assessment team in the present study is a blend of predictive and management-oriented methods of risk communication. One of the following terms is assigned to each case to describe the level of risk of a targeted school attack is present: Imminent, High Risk, Moderate Risk, Low Risk. Along with one of the threat risk level terms a

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description of the salient risk factors and suggestions for management of the risk factors are specified, in an effort to manage the risk and deter violence., Placing all threats on the same continuum allows for quick comparison, and easy understanding of what risk is present for the parents, school administrators and community based therapists that are the consumers of the threat assessment report.

The risk levels used by the threat assessment team in the present study are based on the model for threat risk levels in "The Handbook for Campus Threat Assessment Teams" written by Designer, Randazzo, O'Neill, & Savage (2008).

Imminent risk is the most severe risk level, usually resulting in hospitalization or incarceration. In situations where the immanency of the threat becomes apparent during the threat assessment process, the level of imminent risk is assigned to the situation and immediate action is taken to secure the student who has made the threat, cease progression toward the targeted act of violence, and protect potential victim/s.

High Risk is the risk level reserved for situations in which several risk factors are identified. In High Risk situations the motive for the threatening student is malicious, and the student typically lacks remorse for having caused distress and guilt for doing something wrong. Feelings of justification are often expressed, as the students who make the threat tends to feel his/her desire for revenge is justified for the real or perceived wrong they have suffered.

Moderate concern risk level is assigned to situations in which the student has made a threatening comment, but the intention was to intimidate or exert power over the potential victim. In these situations, the student typically makes a direct threat to the potential victim, or communicates the threat is such a way that he/she knows the potential victim will learn of the

threatening comment. Although remorse and guilt may not initially be expressed, eventually the moderate risk student will confess to simply wanting the potential victim to be scared and comply with his/her wishes.

Low risk is reserved for situations in which a threat was never made, and the report of the threat was false. A threat assessment report is still written to establish the lack of risk factors and presence of mitigating factors deterring the student from engaging in targeted violence. The facts of the case that show the threat was never made or that the report of the threat was false are identified.

In application of a risk management approach, the threat assessment team in the present study establishes a follow up plan for each case. The action plans are individualized and vary in level of involvement based on the risk level. Students who are assigned the risk level of Imminent or High by the threat assessment team in the present study, based on salient research on students who have committed targeted acts of violence are monitored and provided resources as long as necessary to minimize the risk present. Moderate risk situations are typically monitored and provided resources for 6 weeks or more, depending on the lack of mitigating factors and severity of risk factors present. The threat assessment team provides an action plan for each case which accomplishes the following goals: informs the student's school of accommodations that are necessary to keep the school and the student who made the threat safe, recommends services that may be provided by the school to support the student academically and teach them the necessary social skill the student lacks that impact the student's educational success. The action plan also lists what the threat assessment team will contribute to assist in managing the risk of targeted violence and in most cases included regular visits from a threat assessment team counselor, as is consistent with a risk management approach.

CHARACTERISTICS OF PERPETRATORS OF SCHOOL VIOLENCE

Many factors are taken into account when a threat assessment is conducted to determine risk level of a targeted violent act. The Secret Service (2002) identified common characteristics of a school attacker. One of the Secret Service key findings in their 2004 threat assessment guide emphasizes that forming a profile for students who pose a risk of engaging in an act of targeted school violence cannot be accurate or useful. No profile exists for school shooters due to the wide variance in age, race, family composition, school performance, social acumen, and disciplinary history. The characteristics listed below provide guidance on which behavioral tendencies indicate a student is on a pathway to violence. The demographic data related to age, race and family constellation are reviewed primarily to demonstrate that a profile based on how a student "looks" is not plausible. The remainder of the characteristics demonstrate common behavior of students who are planning to engage in a targeted act of violence.

Demographics

The ages of perpetrators of school violence ranges from 11 to 21. However, 85% were between the ages of 13 and 18. Most perpetrators studied by the Secret Service were white, comprising 76% of the population studied. The remainder of the subjects included 12% African-American, 5% Hispanic, 2% Native American, and 2% Asian.

The family constellation of school shooters varies as well. The overwhelming majority (44%) lived in two parent homes. While 35% of children in the United States overall live in a single parent home (Children in Single Parent Homes, n.d), only 19% of students in the Secret Service (2002) study lived in single parent homes The balance of the school shooters in the Secret Service (2002) study lived with a foster parent or split time between parents (5% and 2%, respectively).

Preincident Behaviors

Preincident behaviors are behavioral tendencies that were commonly observed in students who planned and carried out an attack on their school. These tendencies are related to school performance, school discipline history, social tendencies at school, victimization by bullying, and method and directness of communication of the threat (Vossekuil et al, 2002).

School performance cannot be used as an indicator of possible school violence. The Secret Service study found that 80% of students who have attacked their school achieved at least average grades, with 41% earning only A's and B's. Only 5 % were failing in school and 15 % were low achieving. The academic achievement of students who posed a risk of targeted violence demonstrates the high cognitive and planning ability required to execute a school attack. Students who receive special education have been found to make threats more frequently and with more severity by at least one study (Kaplan and Cornell, 2005). However, most students who have carried out their threat to attack the school did not receive special education. The special education eligibility categories of students who have made a threat to attack their school has not yet been articulated in the research. The present study provides this data for the sample studied.

The largest group of school shooters (63 %) never or rarely have been in trouble at school; only 27 % had ever been suspended and 10 % had been expelled. While a history of aggressive behavior is often a factor considered in threat assessment, school discipline history should be reviewed carefully. A simple frequency count of discipline is not an efficient indicator of threat risk. The incidents need to be analyzed by content, identifying tendencies to plan and carry out aggression. A better indicator of a willingness and comfort with using violence is found more readily in the student's aggressive tendencies at home. As exhibited in the data present

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above from the Secret Service, having few discipline incidents and have good grades does not preclude one from engaging in school violence. In fact, the students who exist below the school administration's consciousness can be the most dangerous.

The social tendencies of school attackers studied by the Secret Service were found to be varied. 41% were considered mainstream students, with 44% being involved in at least one activity. 27% of school attackers associated with a group that self-identified as being a non-mainstream student. An example of such a fringe group is the "trench coat mafia" groups of the 1990's. 34% of the school attackers were considered loners.

Being bullied has been found to be a common characteristic of students who commit targeted acts of violence. 71% of school shooters in the Secret Service study (Vossekuil et al, 2002) reported feeling bullied or harassed previous to the attack. While the Secret Service is clear that a causal link has not been established between being bullied and becoming a school attacker, it seems that this may have been a contributing factor to the potential attacker developing a sustained grievance against the intended victims.

 Several other risk factors compounded the problem for the student. The typical student who is bullied will not commit an act of school violence. The student who engages in an attack on their school campus tends to not handle rejection and loss well which exacerbates their experienced as a bullied child and can serve as a source of revenge. Revenge is a common motive for school violence, accounting for 61 % of school attackers. Students who have a desire to carry out their revenge often have a grievance with a specific person. In fact, 81 % of school shooters sustained a grievance, and 66 % had told someone about their grievance. Other motives for school attacks include suicide or desperation (27 %), efforts to solve a problem (34 %), efforts to get attention or recognition (24 %) (Vossekuil et al, 2002).

Frighteningly, only 17 % made a direct threat to the potential target of the attack. When the threat is not communicated to the potential target directly, it is up to others to report their knowledge of the threat. Unfortunately, all too often this does not occur. Hollister, Scolara, and Marquez (2014) found that 65 % of college students who had witnesses Preincident behaviors related to school violence were unwilling to report their knowledge. Epstein writes in the Stetson Law review (2002) about the widespread problem of bystanders of college violence not reporting what they see or know. He points to school attacks on school campuses as a demonstration of why the legal and ethical responsibilities of bystanders of school violence should be a more customary topic of discussion.

Mental Health History

While a history of suicidal ideation and suicide attempts was common among school attackers (78 %), only 34 % had ever received a mental health evaluation and just 17 % had record of a mental health or behavior disorder diagnosis. School attackers also tend to have poor coping skills and decreased ability to deal with significant loses or failure. An astounding 98 % of school shooters had experienced a loss preceding the attack, with 66 % experiencing a "perceived failure or loss of status" (Vossekuil et al, 2002).

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THEORETICAL FRAMEWORK

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Millon's (1969, 1990) Evolutionary theory serves as the theoretical framework for the present study. Theodore Millon used Evolutionary Theory to conceptualize the personality patterns he identified in his ground-breaking research, focusing on the intersection of three polarities (pleasure-pain, active-passive, self-other). Normal and abnormal personality styles were derived from combinations of these polarities. He sought to not only establish personality

categories, but also to demonstrate their "covariation with other mental disorders (Millon & Davis, 1996).

Millon balances the biological factors (Evolutionary Theory) with environmental factors (Millon & Davis, 1996). Organismic influences can influence an individual's experiences. Conversely, individuals with comparable biological makeup develop different personalities depending on their experiences. The interaction between biological and psychological factors is a bidirectional relationship, with each factor impacting the other. Early experiences are considered to be of high influence. Millon's theory asserts that children's behavior elicits counter behavior from those around them. The counter behavior tends to reinforce the child's natural dispositions.

The three polarities that make up Millon's theory are explored (Millon & Davis, 1996). First, the active-passive polarity addresses to what degree an individual makes choices to impact what happens around them or allows surrounding events to impact their behavior (pg. 66-68). The pleasure-pain polarity addresses if an individual's motivation is focused on attractive, positively reinforcing events or aversive, negatively reinforcing events (pg. 66-68). The subject-object polarity addresses whether the things affect us most are ourselves or others (pg. 66-68).

The polarities discussed above are considered in concert and form the following pathological patterns: passive-dependent (pg.68); active-dependent (pg.68); passive independent (pg.68-69); active-independent (pg.69); passive-ambivalent (pg. 69); active ambivalent (pg.69); passive-detached (pg.69); active-detached (pg.69). Adaptive individuals are able to demonstrate a reasonable balance and flexibility across the three polarities. They are capable of both active and passive adaptation. They are motivated toward pleasure and away from pain. They achieve satisfaction from both self and others. Maladaptive personalities show at least one, but sometimes multiple imbalances in the polarities. They may be overly passive or active. They

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tend to be more motivated to avoid pain, not as motivated to seek pleasure. They can be overly reliant on self or others. The combination of these tendencies contributes toward the personality profiles identified on the MACI 2.

Millon's evolutionary theory of personality has been empirically validated. Millon's evolutionary theory has utility in advancing a generative model of personality and political leadership (Immelman, 2005).

Maniac, La Cascia, Picone, Lipari, Cannizzaro, & La Barbera, (2017) found Millon's theory helpful in identifying predictors of early dropout in treatment for gambling disorder. The study investigated the role of personality disorders and clinical syndromes. This study found that the presence of psychiatric comorbidities predicted Gambling disorder treatment outcome according to Millon's evolutionary theory.

Additionally, Magnavita and Carlson (2003) found that Millon's theory was useful in exploring "short-term restructuring psychotherapy (STRP), an integrative accelerated psychodynamically based treatment for individuals suffering from trait disturbances and personality disorders".

Goldfried (1993) discussed several ways in which Millon's evolutionary theory can increase accuracy in clinical diagnosis of personality disorders. Goldfried asserts that Millon's theory adds the much-needed piece of considering individual determinants for understanding interpersonal patterns of behavior when providing such a diagnosis.

Summary

First, threat assessment was explained and differentiated from risk assessment. The Virginia model of threat assessment was reviewed and discussed. The Secret Service 2004 report on threat assessment established 11 questions they suggest for use in establishing the risk level for any threat posed to a school campus. The common characteristics of students who have committed targeted acts of violence on a school campus were reviewed and discussed extensively. The risk levels typically assigned at the conclusion of a threat assessment were described and explained. The theoretical framework and MACI 2 were reviewed and related to the present study.

CHAPTER THREE
METHODOLOGY

The demand for effective threat assessment procedures has grown in recent years, with tragedies such as those that occurred at Columbine High School, Sandy Hook Elementary, and Parkland, Florida so fervently burned in America's mind. While there are myriad studies conducted after school attacks have occurred, the research lacks focus on students who have made a threat but have not yet carried an attack on his/her school campus. School psychologists have received specific training in assessment, behavioral tendencies, behavior management, and counseling. Although more specific training should occur in school psychology training programs related to crisis management and threat assessment, these powerful skills can be applied to conducting threat assessment procedures.

The Millon Adolescent Clinical Inventory, Second Edition (MACI 2) is an assessment commonly used in clinical, juvenile justice, and residential settings to assess personality patterns and the presence of clinical syndromes. The MACI 2 is based on the 1990 evolutionary theory of personality and psychopathology fashioned by the inventory's creator, Theodore Millon. The present study uses MACI 2 data from students ages 13-18 that have been referred for making a threat to commit a targeted act of violence. Investigating the existing personality patterns in this population allows threat assessment team members, especially school psychologists, to understand the personality disturbances among students who have communicated a desire to commit an act of school violence.

The purpose of the present study is to ascertain which personality patterns are most prevalent with students who have expressed a desire to commit an act of school violence. This research also aims to establish the presence and strength of a positive relationship between threat level and type and severity of personality disorder.

RESEARCH QUESTIONS

The following are the research questions that are explored in the present study:

1. What are the demographic characteristics of students referred for threat assessment?

2. Which personality profiles are more severe when comparing the Imminent/High Risk group and the Moderate/Low Risk group?

3. Which personality profiles have average BR scores on the MACI 2 above 60 in imminent and high level of risk cases?

4. Which personality profiles have average BR scores on the MACI 2 above 60 in the low and moderate level of risk cases?

HYPOTHESES

1. There will be no significant differences between the threat risk level groups based on demographic data.

2. The demographic data of students who were administered a MACI 2 as a part of a threat assessment will align with the demographic data of the individuals included in the secret service study on threat assessment.

3. The Imminent/High Risk group will have higher average BR scores than the Moderate/Low Risk group.

4. The Imminent/High risk level group will yield average BR scores that indicate at least a possible presence of the trait at the domain level (min BR of 60) in a distinct pattern.

5. The Moderate/Low risk level groups will yield average BR scores that indicate at least a possible presence of the trait at the domain level (min BR of 60) in a distinct pattern.

PARTICIPANTS

Study participants were selected from a database of students referred to the crisis intervention team at a large, urban, southwestern school district. Students who had made a written or verbal threat to kill a peer or school staff member were included in the subject pool. Descriptive and demographic data that were collected include gender, race, age, and special education eligibility. Descriptive, demographic, and MACI 2 data were de-identified and entered into a dataset to be analyzed. The dataset was absent of any identifying information, so the student's anonymity was maintained.

Participants were selected from a database of students referred to the crisis intervention team at a large, urban, southwestern school district. Students included in the study met the following criteria:

1. Student was the subject of a threat assessment after making a written or verbal threat to kill a peer or school staff member between the school years of 2006-2007 and 2012-2013

2. Student was between the ages 13-18

3. Student was administered the MACI 2 as a part of the threat assessment data collection process

Assessment of Personality Patterns

The Millon Adolescent Clinical Inventory, Second Edition (MACI 2) is a self-report measure of personality patterns and clinical syndromes. Designed specifically for individuals ages 13-18, this inventory uniquely addresses trends among adolescents, based on a clinical adolescent norming sample. This inventory was developed for use in clinical, residential and correctional settings, to evaluate troubled youth, develop an appropriate diagnosis and an effective treatment plan. This assessment differs from other similar inventories that are adapted from adult version. instead of being purely based off of adolescent tendencies among clinical patients. Those who are administered the MACI 2 are presented with the inventory in a paper and pencil format. The 160 items take the form of true false questions, in which the adolescent either endorses or denies a statement about their preferences, behaviors or beliefs.

The MACI 2 is commonly used in research because it provides valid and reliable data. According to the MACI 2 manual (2006), test-retest reliability was found to range from 0.57 (Scale E) to 0.92 (Scale 9), with a median stability coefficient of 0.82, demonstrating satisfactory reliability.

During the test construction of the MACI 2, the items were created using a comprehensive theoretical system (Millon's biosocial learning theory, 1969, and evolutionary theory, 1990). Millon's theory postulates that personality patterns fall on a range from normal to intermediate to pathological. One's personality traits are conceptualized along three polarities: pleasure-pain, active-passive, self-others. The combination of these polarities creates the 12 personality patterns considered on the MACI 2 (See Appendix B for MACI 2 personality pattern descriptions).

Millon's Adolescent Clinical Inventory (MACI 2)

The MACI 2's uses in research are broad and varied. The inventory has been used to identify personality patterns in many populations including: sexually abusive youth (Richardson, Graham, Kelly, Bhate, 2004), troubled Mexican-American youth (Blumentritt, Angle, & Brown, 2004), depressed adolescents who have attempted suicide (Velting, Rathus, Miller, 2000), and youth in juvenile justice settings (Baum, Archer, Forbey, & Handel, 2009).

Calhoun, & Glaser (2004) conducted a study in which the personality typologies were analyzed for a group of female juvenile offenders. Using a Ward's method cluster analysis, this study identified and labeled four clusters: (a) disruptive, antisocials; (b) agreeable, antisocials; (c) anxious, prosocials; and (d) reactive, depressives. The reactive depressive group proved to be the largest, which is indicative of internalizing problems as a conduit to delinquent behavior.

Data gleaned from the MACI 2 has been found to be "predictive of borderline personality traits in adolescent psychiatric inpatients when the effects of depression were controlled for" (Grilo, Sonislow, Fehon, Martino, and McGlashan, 1999). Clinicians have been able to include MACI 2 data in making diagnoses of depression. One study found Moderate correlations between the Doleful and Depressive Affect scales on the MACI 2 and diagnosis of clinical depression (Hiatt and Cornell, 1999). Another study (Pinto & Grillo, 2004) involving psychiatrically hospitalized adolescents found the MACI 2 to have concurrent validity with assessments of similar content and consistent with the class of diagnosis for teens who had a clinical diagnosis.

A thorough review of existing literature has shown that research analyzing the use of the MACI 2 related to threat assessment has not been conducted. The present study bridges this void in the literature, providing an additional application for the personality pattern scales of the MACI 2.

The MACI 2 uses "a base rate transformation score (BR) in which raw scores are converted to a base rate score based on empirically derived prevalence rates of various disorders and syndromes found in a clinical setting" (Blumentritt, Angle, & Brown, 2004), as opposed to standard score transformations commonly used by other assessments. Item selections were determined using the comparison of a targeted criterion group and a "general but troubled adolescent population" (Millon et al, 2006). This method made using standard score transformations nonsensical, as a typical distribution of scores was not expected. Base rates or prevalence data is conducive to allowing accurate creation of a profile, as compared to disorder frequencies within a clinical adolescent population. A narrative report is generated from the responses provided by the participant, which provides information about individual personality patterns, psychological concerns, and clinical syndromes.

Personality patterns scales are provided by the MACI 2 in order to identify emerging traits of disturbance. It is salient to note that the MACI 2 is neither providing diagnostic terms nor assigning diagnoses to the adolescent. The data generated by the MACI 2 is meant to be utilized by a qualified professional in order use clinical judgment along with other sources of data in order to diagnose the adolescent properly.

DATA COLLECTION

The present study analyzed cross sectional data collected by a specialized threat assessment and crisis response team from the years 2006 to 2014 in one of the 10 largest urban school districts in the United States. Each referral that was made to the threat assessment team where the Millon Adolescent Clinical Inventory, Second Edition (MACI 2) was administered as a component of a threat assessment was entered into a single database. Data was collected by a supervisor of the Threat Assessment team, that had access to the data as a part of his job function. The data was given to the researcher with all identifying information removed. The data was then entered into a spread sheet for statistical analysis. Only basic demographical data, threat risk level, and the MACI 2 personality profile BR scores were used for this study.

The results of this study are presented by first describing who was referred for a threat assessment. The age, gender, and race, special education category are discussed. Next, results related to patterns observed between Imminent/High Risk level group and Moderate/Low Risk level group is discussed. Last, patterns in personality profile BR scores are discussed in the Imminent/High risk level group as well as the Moderate/Low risk level group.

Threat Risk Categories Defined

The risk levels used by the threat assessment team in the present study are based on the model for threat risk levels in "The Handbook for Campus Threat Assessment Teams" written by Designer, Randazzo, O'Neill, & Savage (2008).

Imminent risk is the most severe risk level, usually resulting in hospitalization or incarceration. In situations where the immanency of the threat becomes apparent during the threat assessment process, the level of imminent risk is assigned to the situation and immediate

action is taken to secure the student who has made the threat, cease progression toward the targeted act of violence, and protect potential victim/s.

High Risk is the risk level reserved for situations in which several risk factors are identified. In High Risk situations the motive for the threatening student is malicious, and the student typically lacks remorse for having caused distress and guilt for doing something wrong. Feelings of justification are often expressed, as the students who make the threat tends to feel his/her desire for revenge is justified for the real or perceived wrong they have suffered.

Moderate concern risk level is assigned to situations in which the student has made a threatening comment, but the intention was to intimidate or exert power over the potential victim. In these situations, the student typically makes a direct threat to the potential victim, or communicates the threat is such a way that he/she knows the potential victim will learn of the threatening comment. Although remorse and guilt may not initially be expressed, eventually the moderate risk student will confess to simply wanting the potential victim to be scared and comply with his/her wishes.

Low risk is reserved for situations in which a threat was never made, and the report of the threat was false. A threat assessment report is still written to establish the lack of risk factors and presence of mitigating factors deterring the student from engaging in targeted violence. The facts of the case that show the threat was never made or that the report of the threat was false are identified.

For the purposes of this study the cases included are grouped with Imminent and High risk cases in one group and Moderate and Low risk cases in one group. The risk level groups have a similar number of participants in each group.

DATA ANALYSIS

The first research question looked at who was administered the MACI 2 within a population of students who have made a threat to commit an act of targeted school violence and determined if the low/moderate and high/imminent groups differed along any of the demographic variables. SPSS 22 (IBM SPSS, Armonk, New York) statistical package was used to obtain and analyze descriptive statistics for continuous demographic variables (Pallant, 2007), which included age, and categorical demographic variables, which included grade, gender and special education category. Separate chi-square tests of independence were computed to determine if the proportion of participants in the two risk groups differed significantly with regard to grade, special education category, and race. T-tests were computed to determine if the two groups differed significantly in age.

The second research question investigated the severity of psychopathology on the 12 personality patterns across the two risk level groups as measured by the MACI 2. Descriptive statistics were obtained utilizing SPSS 22 (IBM SPSS, Armonk, New York) for all MACI 2 personality profiles. Kolmogorov-Smirnov tests were run for each variable in both groups to evaluate univariate normality. Skewness and Kurtosis coefficients indicate the degree of negative skew for all distributions. Any significant findings are reported. Square-root transformations with Reflected Distributions are used to normalize any significant findings of negative skew. Reflection are done separately for each variable and involve adding 1 to the lowest score in each distribution to calculate a constant. New, reflected variables are then calculated by subtracting each score from the constant.

Univariate Outliers were examined for each variable within each group using box plots and stem and leaf plots. Individual cases identified as outliers on box plots were recoded. High outliers were recoded to the maximum non-outlying value within the group. Low outliers were recoded to the minimum non-outlying value within the group.

The variables for this research question were threat level and personality pattern, which are represented by ordinal variables. The threat levels are coded into SPSS as follows: imminent risk or high risk = 1, moderate or low risk = 2. Since the variables are entered as ordinal variables, the numbers assigned are purely for the purpose of allowing the program to name the variable and allow it to be correlated. In this case, the numbers are not indicative of a rank order or order of preference.

Each group is screened for multivariate outliers using Mahalanobis' Distances. Mahalanobis' Distances are evaluated as chi-square statistics for each participant with degrees of freedom equal to the number of variables in the analysis. Individual cases with significant chi-square values at $p<.001$ indicate multivariate outliers. Box's Test of Equality of Covariance Matrices is run to serve this purpose.

The third research question examines which personality profiles have an average BR score that indicate presence of the trait at a clinically significant level of concern in the Imminent-High risk level group. The final research question examines which personality profiles have an average BR score that indicate presence of the trait at a clinically significant level of concern in the Moderate-Low risk level group.

Repeated Measures ANOVA and follow up ANOVA are conducted comparing the Low/Moderate risk level and High/Imminent risk level groups overall on personality profile from the MACI 2. Follow up ANOVA analysis for each personality profile are conducted to determine where the specific differences lie on each personality profile between the Low/Moderate risk and High/Imminent risk groups. Mean and Standard Deviations for each personality profile are reported. A Repeated Measures ANOVA comparing groups on risk level reveals if a significant main effect exists when the risk level is not considered.

In order to determine which personality profiles showed a significant difference between the average BR score between the Low/Moderate risk group and the Imminent/High risk group the data was submitted to a one-way analysis of variance (ANOVA) with threat risk level group (Imminent/High risk group, Moderate/Low Risk group) as the independent variable. The dependent variable was the personality profile BR score. The percentage of cases that have BR scores greater than or equal to 60 in each personality profile, separated by risk level group, are examined.

Summary

In this chapter the focus of the present study was reviewed. The research questions were listed and hypotheses for each question were shown. Participant demographics were described and evidence of the empirical strength of the MACI 2 was discussed. Data collection and analysis techniques anticipated for the present study were delineated and expounded.

CHAPTER FOUR

RESULTS

The purpose of this study was to examine who was being referred for a threat assessment. It further examined whether the severity of psychopathology differed by threat level assigned at the culmination of a threat assessment. The presence of psychopathology was measured by the Millon Adolescent Clinical Inventory, Second Edition personality profiles.

Descriptive and demographic data that was collected included age, gender, grade, race, and special education eligibility category. Personality patterns scales are provided by the MACI 2 in order to identify emerging traits of disturbance. All analyses were conducted using SPSS 23. Specifically, this study investigated whether the four threat levels used to assign a risk level at the culmination of a threat assessment have significant distinct profiles.

The present study considered the following research questions:

1. What are the demographic characteristics of students referred for threat assessment?

2. Which personality profiles are more severe when comparing the Imminent/High Risk group and the Moderate/Low Risk group?

3. Which personality profiles have average BR scores on the MACI 2 above 60 in imminent and high level of risk cases?

4. Which personality profiles have average BR scores on the MACI 2 above 60 in the low and moderate level of risk cases?

The results of this study are presented by first describing who was referred for a threat assessment. The age, gender, and race, categories are discussed. Next, results related to patterns observed between Imminent/High Risk level group and Moderate/Low Risk level group are

discussed. Last, patterns in personality profile BR scores are discussed in the Imminent/High

risk level group as well as the Moderate/Low risk level group.

WHAT ARE THE DEMOGRAPHIC CHARACTERISTICS OF STUDENTS REFERRED FOR THREAT ASSESSMENT?

The data for the present study was obtained through data from 40 threat assessment cases.

Students referred for a threat assessment varied in age, gender, grade, race and special education

eligibility. The demographic data is represented for the Secret Service Study in Table 1 and the

present study in Table 2.

Age.

The ages of students referred for a threat assessment in the present study ranged from 11

years to 18 years old. 7.5% of student included in the study were ages 11-12 (n=3). The vast

majority (57.5%) of students referred were 13 years to 14 years old (n=23) and 35% were ages

15-18 (n=14). The attackers included in the Secret Service study ranged in age from 11 to 21,

with most attackers between the ages of 13 and 18 at the time of the attack (85 percent, n=35).

Grade.

The students included in the study were split evenly between middle school and high

school with 50% of students in grades 6, 7, or 8 (n=20) and 50% in grades 9, 10, 11, or 12

(n=20). Information regarding the grades of the students studied in the Secret Service study was

not reported. This would be an area for further investigation

Gender.

Males comprised 90% of the students include in the present study (n=36). Females comprised 10% (n=4). All of the incidents of targeted school violence examined in the Safe School Initiative were committed by boys or young men (100 percent, n=41).

Race.

In the present study White students comprised 40% of the students in the study (n=16) and 30% of the students identified as being Hispanic (n=12). Black students comprised 12.5 % (n=5), Asian students comprised 7.5% (n=3) and 10% of students identified with multiple races (n=4). In the Secret Service study three-quarters of the attackers were white (76 percent, n=31). One-quarter of the attackers came from other racial and ethnic backgrounds, including African American (12 percent, n=5), Hispanic (5 percent, n=2), Native Alaskan (2 percent, n=1), Native American (2 percent, n=1), and Asian (2 percent, n=1).

Special Education Eligibility.

65% of the students referred for a threat assessment did not receive special education services (n=26). The students that did receive special education services students with a Section 504 plan made up 5% (n=2), students under the category of Specific Learning Disability made up 10% (n=4) students under the category of Serious Emotional Disturbance made up 17.5% (n=7), and students under the category of Speech and Language Impairment made up 2.5% (n=1). Information regarding the special education status of the students studied in the Secret Service study was not reported.

Table 1		
Secret Service Study Demographic Variables		
<u>Age</u>	<u>N</u>	<u>Percent</u>
11-12	6	15%
13-18	35	85%
<u>Gender</u>	<u>N</u>	<u>Percent</u>
Male	41	100%
Female	0	0%
<u>Race</u>	<u>N</u>	<u>Percent</u>
White	31	76%
Hispanic	2	5%
Black	5	12%
Asian	1	2%
Multi-race	0	0%
Native American	1	2%
Native Alaskan	1	2%

Table 2
Current Study Demographic Variables

	Total (N=40)		H/I (N=21)		L/M (N=19)	
<u>Age</u>	<u>N</u>	<u>Percent</u>	<u>N</u>	<u>Percent</u>	<u>N</u>	<u>Percent</u>
11	0	0%	0	0%	0	0%
12	0	0%	0	0%	0	0%
13	11	27.5%	7	33.33%	6	31.58%
14	12	30.0%	4	19.05%	9	42.86%
15	5	12.5%	1	4.76%	4	21.05%
16	3	7.5%	3	14.29%	0	0%
17	4	10.0%	2	9.52%	2	10.53%
18	2	5.0%	2	9.52%	0	0%

Gender	N	Percent	N	Percent	N	Percent
Male	36	90%	19	90.48%	17	80.95%
Female	4	10%	2	9.52%	2	1.53%
Grade	N	Percent	N	Percent	N	Percent
6	1	2.5%	1	4.76%	0	0%
7	6	15.0%	3	14.29%	3	15.79%
8	13	32.5%	7	33.33%	6	31.58%
9	5	12.5%	5	23.81	0	0%
10	8	20.0%	3	14.29%	5	26.32%
11	5	12.5%	2	9.52%	3	15.79%
12	2	5.0%	0	0%	2	10.53%
Race	N	Percent	N	Percent	N	Percent
White	16	40.0%	10	47.62%	6	31.58%
Hispanic	12	30.0%	5	23.81%	7	36.84%
Black	5	12.5%	2	9.52%	3	15.79%
Asian	3	7.5%	1	4.76%	2	10.53%
Multi-race	4	10.0%	3	14.29%	1	5.26%
Native American	0	0.0%	0	0%	0	0%
Native Alaskan	0	0%	0	0%	0	0%

Special Education Eligibility	N	Percent	N	Percent	N	Percent
Not eligible	26	65.0%	10	47.62%	16	84.21%
Section 504 plan	2	5.0%	2	9.52%	0	0%
Specific Learning Disability	4	10.0%	4	19.05%	0	0%
Serious Emotional Disturbance	7	17.5%	5	23.81%	2	10.53%
Speech and Language Disability	1	2.5%	0	0%	1	5.26%
L/M: Low/Moderate Risk Level Group, H/I: High/Imminent Risk Level Group						

Comparison of demographic data by risk level group

A comparison of age, grade, and gender was conducted with regard to risk level group. The number of subjects in each group, mean, standard deviation and standard error mean for age, grade, and gender are represented by risk level group in Table 3. Table 4 shows the crosstabulations for Gender, Grade, and Race.

A t-test was conducted with age as the dependent variable and risk level group as the dependent variable. The results were not significant (t (38) = 1.114, p = .261). All suggesting that the risk level groups did not differ in age.

Chi-square tests of independence were performed to examine the relation between Risk Level and Special Education Category, Race, and Grade.

The relation between Special Education Category and Risk Level was significant, X^2 (1, N = 40) = 9.594, p=.048. Students referred for a threat assessment were more likely to be eligible for special education in the High/imminent risk level group than the Low/Moderate risk level group. Students who were in the High/Imminent group were mostly eligible for special education under the categories of Emotional Disturbance or Specific Learning Disability.

The relation between Race and Risk Level was not significant, X^2 (1, N = 40) = 2.774, p=.596. Each race identification group was evenly distributed between the risk level groups. Students in each risk level group were no more likely to identify with any particular race.

The relation between Grade and Risk Level was not significant, X^2 (1, N = 40) = .011, p=.916. Grade represented in the sample were evenly distributed between the risk level groups. Students in each risk level group were no more likely to be in any particular grade.

The risk level groups are not significantly different in regard to race, gender and grade. The groups differed in regard to special education eligibility category. Students in the High/Imminent risk level group were eligible for special education at a much higher frequency, specifically under the categories of Emotional Disturbance or Specific Learning Disability.

Table 3 Comparison of age and grade risk level group					
	Risk Level	N	Mean	Std. Deviation	Std. Error mean
AGE	Low and Moderate Risk	19	14.74	1.821	.418
	High and Imminent Risk	21	14.19	1.167	.255
GRADE	Low and Moderate Risk	19	9.26	1.695	.389
	High and Imminent Risk	21	8.57	1.326	.289

Table 4 Crosstabulations		H/I	L/M	Total
Gender	Male	19	17	36
	Female	2	2	4
Special Education Eligibility	No SpEd Elig	10	16	26
	504	2	0	2
	SLD	4	0	4
	ED	5	2	7
	SL	0	1	1
Race	White	10	6	16
	Black	2	3	5
	Hispanic	5	7	12
	Asian	1	2	3
	Multi	3	1	4

WHICH PERSONALITY PROFILES ARE MORE SEVERE WHEN COMPARING THE IMMINENT/HIGH RISK GROUP AND THE MODERATE/LOW RISK GROUP?

Table 5 shows the descriptive statistics for the 12 personality profiles by threat level. There were 19 cases in the Low/Moderate group and 21 cases in the High/Imminent group with a total of 40 cases included in the present study. The average BR score for the Low/Moderate Risk group was 49.56, ranging from 28.7 to 65.37. The average BR score for the High/Imminent Risk group was 54.59, ranging from 42.1 to 65.7. The average standard deviation for the Low/Moderate group is 17.1, ranging from 11.0 to 27.1. The average standard deviation for the High/Imminent group is 20.39, ranging from 14.7 to 25.9.

Table 5

Descriptive Statistics for Millon Adolescent Clinical Inventory, Second Edition (MACI-2) Personality Profiles by Risk Level

		Low/Moderate Risk Level Group					
	N	Mean BR	SD	Min	Max	Skewness	Kurtosis
PP 1 - Introversive (Schizoid)	19	57.00	19.24	31	94	0.40	-0.99
PP 2A - Inhibited (Avoidant)	19	55.58	21.59	25	92	0.25	-1.38
PP 2B - Doleful (Depressive)	19	44.95	27.12	7	89	0.28	-1.44
PP 3 - Submissive (Dependent)	19	65.37	10.97	43	82	-0.35	-0.58
PP 4 -Dramatizing (Histrionic)	19	54.63	17.37	16	86	-0.28	0.02
PP 5 - Egoistic (Narcissistic)	19	49.68	20.45	4	92	-0.33	0.68
PP 6A - Unruly (Antisocial)	19	48.42	13.44	18	68	-0.73	0.10
PP 6B - Forceful (Sadistic)	19	29.74	14.52	10	70	1.19	2.10
PP 7 - Conforming (Compulsive)	19	59.42	14.43	38	82	0.14	-1.18
PP 8A - Oppositional (Negativistic)	19	53.32	18.45	23	79	-0.36	-1.32
PP 8B - Self-Demeaning (Masochistic)	19	44.42	22.48	15	92	0.53	-0.62
PP 9 - Borderline Tendency (Borderline)	19	35.47	22.62	8	85	0.97	0.34

		High/Imminent Risk Level Group					
	N	Mean BR	SD	Min	Max	Skewness	Kurtosis
PP 1 - Introversive (Schizoid)	21	65.10	21.17	17	108	0.23	0.81
PP 2A - Inhibited (Avoidant)	21	60.90	23.55	15	91	-0.41	-0.92
PP 2B - Doleful (Depressive)	21	59.33	25.60	16	100	-0.41	-1.24
PP 3 - Submissive (Dependent)	21	57.19	16.43	27	95	0.27	0.19
PP 4 -Dramatizing (Histrionic)	21	47.14	19.41	12	85	-0.30	-0.07
PP 5 - Egoistic (Narcissistic)	21	42.10	16.88	13	76	0.19	-0.30
PP 6A - Unruly (Antisocial)	21	59.48	25.94	19	110	0.29	-0.95
PP 6B - Forceful (Sadistic)	21	44.76	26.46	3	87	-0.16	-1.28
PP 7 - Conforming (Compulsive)	21	46.29	15.42	19	78	0.51	-0.01
PP 8A - Oppositional (Negativistic)	21	65.71	16.63	32	96	-0.88	0.63
PP 8B - Self-Demeaning (Masochistic)	21	56.62	23.66	16	96	-0.15	-0.94
PP 9 - Borderline Tendency (Borderline)	21	50.90	20.28	17	87	-0.24	-0.87

MACI 2 scores for each of the 12 dependent variables were converted into z-scores separately within the Low/Moderate and High/Imminent groups to screen for univariate outliers. Extreme outliers were defined as $z \leq -3.29$ or $z \geq 3.29$ (Field, 2013). Z-scores within the Low/Moderate group ranged from -2.26 to 2.78 and from -2.27 to 2.30 within the High/Imminent group, suggesting the absence of extreme univariate outliers on any of dependent variables within both groups.

Mahalanobis' Distances were computed for each participant in the Low/Moderate and High/Immanent groups to screen for multivariate outliers. Mahalanobis' Distances were

calculated using the nine dependent variables and were evaluated as chi-square statistics with 9

degrees of freedom. Values ranged from $X^2(9, N = 40) = 7.33, p > .05$ and $X^2(9, N = 40) =$

14.93, $p > .05$) within the Low/Moderate group and between $X^2(9) = 7.31, p > .05$ and $X^2(9) =$

16.22, $p > .05$ within the High/Imminent group, indicating an absence of multivariate outliers.

Box's Test of Equality of Covariance Matrices was not significant [$F(78,459) = 1.05, p = .358$],

indicating that the homogeneity of variance-covariance assumption was supported.

Comparing overall severity of the risk level groups

Repeated Measures ANOVA and follow up ANOVA were conducted comparing the

Low/Moderate risk level and High/Imminent risk level groups overall on personality profiles

from the MACI 2. Follow up ANOVA analysis for each personality profile were conducted to

determine where the specific differences lie on each personality profile between the

Low/Moderate risk and High/Imminent risk groups. Mauchly's test indicated that the

assumption of sphericity was violated for the main effect of subtest $X^2(65) = 405.39, p < .001$.

Therefore, degrees of freedom were corrected using the Greenhouse-Geisser estimates of

sphericity ($\varepsilon = .27$ for the main effect of subtest). There was a significant main effect for MACI

2 subtest $F(2.93, 111.29) = 5.41, p = .002, \eta^2 = .13$, suggesting that there is significant

variability among MACI 2 subtest profiles when the risk level is not considered. There was also

a significant interaction between MACI 2 subtest and risk group $F(2.93, 111.29) = 2.84, p =$

$.042, \eta^2 = .07$. This indicates that there is a measurable difference between the Low/Moderate

risk group and the High/Imminent risk group.

In order to determine which personality profiles showed a significant difference between

the average BR score between the Low/Moderate risk group and the Imminent/High risk group

the data for each of the MACI 2 personality profiles was submitted to a one-way analysis of

variance (ANOVA) with threat risk level group (Imminent/High risk group, Moderate/Low Risk group) as the independent variable. The dependent variable for each ANOVA was the personality profile BR score. MACI 2 personality profile scores were significantly higher in the High/Imminent risk group for PP 6B-Forceful [F (1, 38) = 4.80, p = .035], PP 8A-Oppositional [F (1, 38) = 4.99, p = .031], and PP 9-Borderline Tendency [F (1, 38) = 5.18, p = .029]. The Low/Moderate risk group scored significantly higher in PP7-Conforming, F (1, 38) = 7.69, p = .009. Significant differences were not observed for PP1-Introversive [$F(1, 38)$ = 1.58, p = .215], PP2A-Inhibited [$F(1, 38)$ = 0.55, p = .462], PP2B-Doleful [$F(1, 38)$ = 2.98, p = ..093], PP3-Submissive [$F(1, 38)$ = 3.35, p = .075], PP4 Dramatizing [$F(1, 38)$ = 1.64, p = .208], PP5-Egoistic [$F(1, 38)$ = 1.65, p = .207], PP6A-Unruly [$F(1, 38)$ = 2.77, p = .104], and PP8B Self-Demeaning [$F(1, 38)$ = 2.78, p = .104].

WHICH PERSONALITY PROFILES HAVE AVERAGE BR SCORES ON THE MACI 2 ABOVE 60 IN IMMINENT AND HIGH LEVEL OF RISK CASES?

Imminent and high-risk cases showed an overall elevated presence of pathology on the introversive-schizoid, inhibited-avoidant, and doleful-depressive with cases in each personality profile having 57% of the scores falling over 60. Students who were in the High/Imminent risk level group showed an overall elevated presence of pathology in Unruly-Antisocial personality profile, with nearly 43% of the cases having BR scores that rose above 60. Students who were in the High/Imminent risk level group showed an overall elevated presence of pathology in the Oppositional-negativistic personality profile, with over three quarters of the cases having BR scores above 60. While the overall mean BR score for Self-Demeaning-Masochistic personality profile does not reach a level of clinical significance, it is salient to note that 57% of the cases

did have BR scores above 60. See Table 6 for mean and standard deviations for all personality

profiles in the High/Imminent risk group.

Table 6 High/Imminent Risk Group			
Personality Profile	Mean BR	SD	% of cases > 60
PP1 -Introversive (Schizoid)	64.7	14.7	57.14
PP2A - Inhibited (Avoidant)	60.9	23.6	57.14
PP 2B - Doleful (Depressive)	59.3	25.6	57.14
PP 3 – Submissive (Dependent)	57.2	16.4	42.86
PP 4 -Dramatizing (Histrionic)	47.1	19.4	19.05
PP5 - Egoistic (Narcissistic)	42.1	16.9	14.29
PP 6A - Unruly (Antisocial)	59.5	25.9	42.86
PP 6B - Forceful (Sadistic)	44.8	26.5	33.33
PP 7 – Conforming (Compulsive)	46.3	15.4	19.05
PP 8A – Oppositional (Negativistic)	65.7	16.3	76.19
PP 8B - Self-Demeaning (Masochistic)	56.6	23.7	57.14
PP 9 - Borderline Tendency (Borderline)	50.9	20.3	28.57

WHICH PERSONALITY PROFILES HAVE AVERAGE BR SCORES ON THE MACI 2 ABOVE 60 IN THE LOW AND MODERATE LEVEL OF RISK CASES?

Low and Moderate risk cases showed an overall elevated presence of pathology on the

following personality profiles: submissive-dependent, with almost three quarters of scores falling

above 60 and conforming-compulsive with nearly half of the cases with a score above 60.

However, it is salient to note that although the mean BR score for oppositional-negativistic did

not rise to a clinically significant, over half of the cases had scores that fell above 60. See Table

7 for mean and standard deviations for all personality profiles in the Low/Moderate risk group.

Table 7
Low/Moderate Risk Group

Personality Profile	Mean BR	SD	% of cases above 60
PP1 -Introversive (Schizoid)	57.0	19.2	36.84
PP2A - Inhibited (Avoidant)	55.6	21.6	42.11
PP 2B - Doleful (Depressive)	45.0	27.1	36.84
PP 3 – Submissive (Dependent)	65.4	11.0	73.68
PP 4 -Dramatizing (Histrionic)	54.6	17.4	31.58
PP5 - Egoistic (Narcissistic)	49.7	20.5	31.58
PP 6A - Unruly (Antisocial)	48.4	13.4	15.79
PP 6B - Forceful (Sadistic)	28.7	12.0	5.26
PP 7 – Conforming (Compulsive)	59.4	14.4	47.37
PP 8A – Oppositional (Negativistic)	53.3	18.5	52.63
PP 8B - Self-Demeaning (Masochistic)	44.4	22.5	21.05
PP 9 - Borderline Tendency (Borderline)	33.2	18.1	15.79

CHAPTER FIVE

DISCUSSION

The present study has identified personality profile characteristics in students that have made a threat but not carried out a targeted act of violence that are consistent with those observed in students who have carried out a school shooting. The aim of this study is not to develop a profile by which school staff and mental health professionals can identify who will carry out a threat. In fact, it is highly dangerous to even insinuate that a profile could exist for such a purpose. Each person that makes a threat has so many individual characteristics, experiences, and circumstances that it is impossible to use any research data to form one or even a compilation of profiles. The aim of this study, rather, is to identify the personality profile characteristics so that this information can be paired with what we have learned about circumstances that create a breeding ground for developing a threat with the purpose of identifying where tier 1 level interventions can be implemented to mitigate the risk of a threat being developed in the first place. The significance found in the statistical analysis of this study was not overwhelming. As such, the study is exploratory in nature but does a good job of identifying areas in which educators and mental health professionals can make an impact on the lives of hurting children and mitigate the circumstances that can lead to the development of a threat.

The most striking difference between the students included in the present study and the Secret Service study is in the racial makeup of the groups. The secret services study had a much higher representation of white participants (N=31, 76%) with just 5 Black students and 5 students that were Hispanic, Asian, Multi-Race, Native American or Native Alaskan. The present study was more evenly spread between white (40%) and Hispanic students (30%). The present

study was conducted in the 5th largest school district in the nation, located in the south-west region of the United States where the population has higher proportion of Hispanic residents.

About the same percentage of black students were included in each study. The multi-racial students made up 10% of the present study while the Secret Service study had none. The region in which the present study was conducted is diverse, likely contributing to the higher percentage of multi-racial participants.

There were significant differences between the High/Imminent risk level group and the Moderate/Low group in Special Education Category. The High/Imminent risk level group had significantly more students who were eligible for special education services, mostly under the categories of Emotional Disturbance (ED) and Specific Learning Disability (SLD). This is consistent with research by Cornell (2005) that found that overall students who receive special education services not only made more threats, but the threats made were more severe.

This difference between the risk level groups may be explained by the tendency for common characteristics that meet criteria for special education eligibility under these categories (ED and SLD) aligning with clinical guidelines for higher risk of violence. Unfortunately, there is a lack of research investigating if children who are found eligible for special education services differ from other groups on the MACI 2 scales.

What is clear from the data is that students who receive special education services under the category of Emotional Disturbance were six times more likely to be represented in the sample than any other special education category. That difference is alarming, and indicates that the current interventions available for students under the ED category are not sufficient. Our special education system needs better (more specific and more measurable) goals for the students'

Individualized Education Programs. These goals should address the tendencies identified that could lead to a potential threat.

The differences identified for the risk level groups indicate that the Low/Moderate risk level group tended to be significantly more conforming and compulsive, while the High/Imminent risk level group tended to be more oppositional and negativistic. This finding is consistent with the findings of the Secret Services study and the accompanying guide that suggests that students who pose a risk of targeted violence to their school tend to show oppositional behavioral tendencies (Vossekuil et all 2002). Interventions can be created to address students who tend to be oppositional to school staff and peers. More training for school staff is needed to teach effective strategies for creating a meaningful connection with oppositional students. These strategies could be the difference between a grievance developing into a threat or being mitigated by empathetic intervention from a trusting school staff member.

The High/Imminent risk level group displayed significantly more borderline tendencies and Forceful/Sadistic behaviors than the Low/Moderate group. However, it is salient to note that the mean BR scores for Borderline tendencies did not rise above 60 and just 28% of the cases reached a level of clinical significance. Forceful-Sadistic behaviors in the High/Imminent risk group average BR score did not reach a level that would cause clinical concern, with just a third of cases reaching a level of clinical significance. This does mean that Borderline or Forceful/Sadistic tendencies can be easily dismissed since they are linked more consistently with higher threat risk cases. More research is needed to tease out which specific Borderline and Forceful/Sadistic tendencies are observed in higher risk cases so that early intervention efforts can be made to address such needs.

The data showed that Introversive-Schizoid, Inhibited-Avoidant, and Doleful-Depressive personality traits were identified in Imminent/High risk cases. This finding is consistent with the secret service study findings that most attackers did not threaten the target of the violence directly and that acts of targeted violence on a school campus are planful, "the end result of a comprehensible process of thinking and behavior–behavior that typically begins with an idea, progresses to the development of a plan, moves on to securing the means to carry out the plan, and culminates in an attack" (Vossekuil et all 2002). The biggest implication for this finding is that school staff would be wise to engage with the withdrawn student that looks worrisome to the staff member, instead of avoiding the child all together. Although it may be natural to want to avoid people that we find potentially dangerous, making a connection with the child that is avoidant of healthy social contact could provide the one meaningful connection with an adult at school that can deter a threat being developed in the first place, let alone carried out.

In addition to having a depressed view of the world, students who pose a serious risk of targeted school violence feel persecuted by the potential targets. The significant Unruly-Antisocial behaviors that were identified in the present study are consistent with the Secret Service study finding that most attackers felt persecuted by the targeted school students, staff, and environment in general (Vossekuil et all 2002).

As if a depressed worldview and antisocial tendencies were not enough to bear, students in the higher risk level groups also had significantly higher scores on the Oppositional-Negativistic personality pattern. This results in a child who is sad but also avoiding and oppositional toward positive social interactions. These behaviors lead to the oppositional and negativistic outlook that develops into a grievance against the target and plan to attack. A presence of Self demeaning tendencies means the student is not likely to care about what

happens to them in the process of the attack, prioritizing the point they are trying to make over their safety and seeing the attack as a much-needed release from the angst they feel.

The identification of submissive-dependent and conforming-compulsive behavioral tendencies in the Low/Moderate risk group speaks to the nature of the infraction. The students who were referred for making a threat of targeted violence against their school, but ultimately were assigned a lower level of risk tend to be students who are angry about a particular incident and made a rash statement. These statements tend to be unsubstantiated claims, lacking planning and materials needed to carry out a threat. Students who are assigned Low or Moderate risk level possess some problematic behaviors but are submissive and conforming in nature. These characteristics are prime for producing drastic statements, including threats of targeted violence, but lack the deeply depressive and antisocial features observed in the High/Imminent risk group.

LIMITATIONS OF THE STUDY

The primary limitation of the study is the number of participants in the study. A larger sample size would solidify the results gleaned from the present study. Including participants from other parts of the country would also strengthen the findings.

IMPLICATIONS FOR PRACTICE

School psychologists have unique training in assessing mental health related matters that enable them to be instrumental in both prevention of a targeted school attack as well as the threat assessment process once a threat has been discovered (O'Donnell & Dunlap, 2014; Perfect & Morris, 2011). As school psychologists, we are able to use out knowledge in "cognitive, academic and social–emotional assessment; consultation; in-service education; crisis intervention; counseling/therapy; and program evaluation/research" (Perfect & Morris, 2011) to

help our schools be as safe as possible. Having expertise in these areas gives the opportunity to reach students who are in crisis and intervene before a potential attacker is able to carry out a plan of targeted violence.

More funding is needed for school districts to hire more school psychologists so that the necessary preemptive interventions can be implemented with fidelity by a professional with specific training on such tasks. Since nearly all students who make a threat of targeted violence have experienced a recent significant loss more interventions related to grief and coping with difficult circumstances are needed. The school psychologist is the ideal school staff to carryout such interventions, as they have knowledge of how students learn and the ways the myriad external factors can affect a student's ability to learn.

While the current NASP approved training includes some course work directly related to crisis management, this study shows the importance of having more course work dedicated specifically to threat assessment procedures. National Association of School Psychologists (NASP) Standard 5.2 requires NASP approved programs to equip graduates with knowledge on principals and research related to "evidence-based strategies for effective crisis response". NASP also requires graduates to demonstrate skills to implement effective crisis preparation, response, and recovery (2010 NASP Standards, 2010). Having specific coursework in training programs would be an effective manner to impart this important knowledge. This could easily be accomplished by developing a course based on the NASP P.R.E.P.A.R.E. training program. Currently, NASP members can participate in a multi-day training in the P.R.E.P.A.R.E. However, it would be prudent to have a semester long course or even a seminar class that would go into more detail and allow for more opportunity to practice the skills learned.

Understanding what developing personality patterns are common in students who have made a threat may help school psychologists identify students that are at risk for continuing down a Pathway to Violence (Calhoun & Weston, 2004) and avert their course toward more healthy choices.

It would behoove school psychologists to consider using the MACI 2 when conducting threat assessments, as it has demonstrated a great deal of utility in identifying the severity of several salient personality patterns in students who pose a risk of targeted violence.

When concerns of mental health nature arise on a school campus, school administrators look to the school psychologist for assistance. Possessing knowledge of threat assessment, especially prevalent personality patterns among students who pose a risk of targeted school violence, would bode well for the school psychologist when they are called upon to help in such situations.

FUTURE RESEARCH

One way in which the present research could be expanded would be to learn more about the characteristics of the students in the Low/Moderate risk level group. It would be interesting to investigate deeper into the source of their submissive-dependent and conforming-compulsive tendencies. Consideration should also be given to examination of the cultural and ecological factors that may affect risk level

Expanding the current study to larger populations would take the findings even further. Using data from a similar but more common social-emotional assessment such as the Behavior Assessment Scales for Children would enable a researcher to gather more data from varying sources.

Along this vein, a comparison could be made between the parent rating, teacher rating, and self-ratings on such assessments with students who have posed a risk of targeted violence but have not yet carried out any violence.

A researcher could look for qualitative factors that occurred during the period in which the student was developing and communicating a potential threat. Are there any themes to be identified in the events occurring in the student's life one day, one week, or one month before the intended attack?

With the increase in digital communication and the use of social media, it would be interesting to investigate the differences between threats made via social media and verbally communicated threats. Are less serious risk levels assigned to cases that involve the student using GIF's or mini videos to communicate the potential threat? Is the presence of hate-based media more prevalent in cases which are assigned a more serious threat risk level?

Longitudinal studies could be conducted to track the students' long-term progress in school and mental health functioning after a threat assessment is completed. The student could be evaluated based on self-rating scales, assessing the student's level of self-awareness of his/her own psychological struggles. Long term studies could track the student's follow up treatment with a mental health professional and the success of any treatment received.

The sample could be increased to include students in other settings besides the school. Including students who are incarcerated for making threats or students receiving inpatient psychiatric care such concerns add depth to the study.

An interesting expansion of the study that would apply to the medical field would be to examine what medications the children who have made a threat of targeted violence were prescribed while the threat was developing and being communicated.

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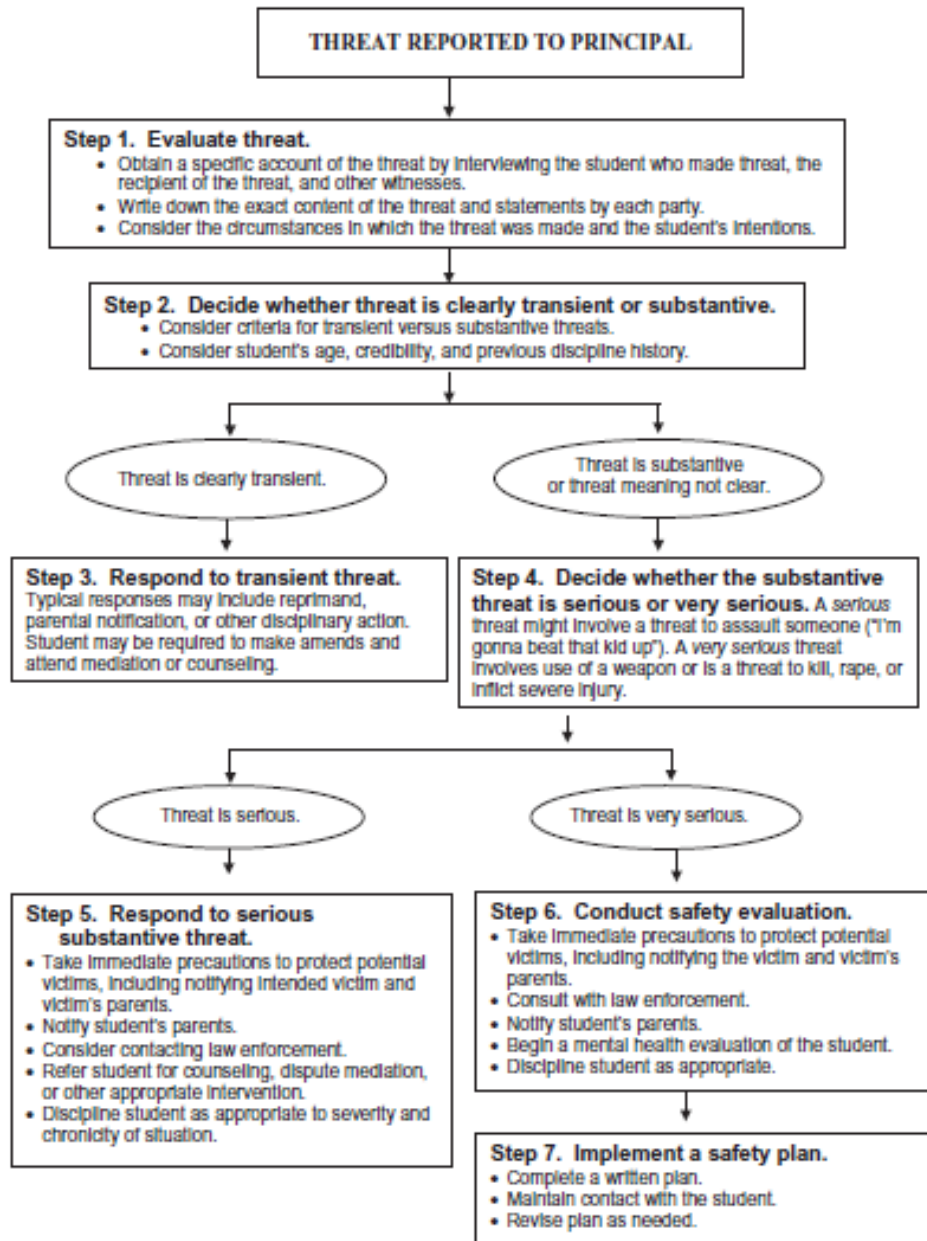Education published with the New Jersey Principals and Supervisors Assoc., 2001

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APPENDIX A

Figure 3.1. Decision tree for student threat assessment

THREAT REPORTED TO PRINCIPAL

Step 1. Evaluate threat.
- Obtain a specific account of the threat by interviewing the student who made threat, the recipient of the threat, and other witnesses.
- Write down the exact content of the threat and statements by each party.
- Consider the circumstances in which the threat was made and the student's intentions.

Step 2. Decide whether threat is clearly transient or substantive.
- Consider criteria for transient versus substantive threats.
- Consider student's age, credibility, and previous discipline history.

Threat is clearly transient.

Threat is substantive or threat meaning not clear.

Step 3. Respond to transient threat.
Typical responses may include reprimand, parental notification, or other disciplinary action. Student may be required to make amends and attend mediation or counseling.

Step 4. Decide whether the substantive threat is serious or very serious. A *serious* threat might involve a threat to assault someone ("I'm gonna beat that kid up"). A very serious threat involves use of a weapon or is a threat to kill, rape, or inflict severe injury.

Threat is serious.

Threat is very serious.

Step 5. Respond to serious substantive threat.
- Take immediate precautions to protect potential victims, including notifying intended victim and victim's parents.
- Notify student's parents.
- Consider contacting law enforcement.
- Refer student for counseling, dispute mediation, or other appropriate intervention.
- Discipline student as appropriate to severity and chronicity of situation.

Step 6. Conduct safety evaluation.
- Take immediate precautions to protect potential victims, including notifying the victim and victim's parents.
- Consult with law enforcement.
- Notify student's parents.
- Begin a mental health evaluation of the student.
- Discipline student as appropriate.

Step 7. Implement a safety plan.
- Complete a written plan.
- Maintain contact with the student.
- Revise plan as needed.

APPENDIX B

Scale 1: Introversive

Demonstrating deficits at both ends of the pleasure-pain polarity, the Introversive scale shows the passive-detached personality style (McCann, 1997). Elevated scores on this scale indicate a decreased ability to experience either pleasure or pain to motivate their behavior. Those who have high scores on this scale likely have difficulty connecting with others, displaying a detached, remote demeanor. This scale is most similar to the DSM Schizoid personality type in the (Millon, 2006).

Scale 2A: Inhibited

Not only do adolescents who have high scores on the Inhibited scale lack the ability to experience joy, but they have are hypersensitive to actual and anticipated psychic pain. These types tend to lean toward self-alienating behavior, and have an orientation toward pain. This scale is most similar to the DSM avoidant personality type (McCann, 1997).

Scale 2B: Doleful

Scales 1, 2A and 2B all indicate problems in the pleasure-pain polarity. The Doleful scale experiences despair when the future is considered and demonstrates a sense of loss of hope. This scale is most similar to the depressive personality type in the DSM-IV (Millon, 2006).

Scale 3: Submissive

It is common for adolescents who have high scores on the submissive scale to find their feelings of security, confidence and joy almost entirely from relationship with others (Millon, 2006). These teens can be described as clingy and will often downplay their own strengths and

accomplishments in an effort to maintain relationships out of fear of abandonment. This scale is most similar to the DSM dependent personality type (McCann, 1997).

Scale 4: Dramatization

Sociable, talkative, and attentions seeking, teens that respond strongly to the Dramatization scale do not tolerate enduring bonds because they are easily bored and seek continuous stimulation (McCann, 1997). Although peers may initially find adolescents with a high score in this scale to be entertaining, they quickly lose interest due to the teen's incessant focus on superficial attributes. This scale is most similar to the DSM histrionic personality disorder in the (McCann, 1997).

Scale 5: Egotistic

The Egotistic scale is designed to detect a tendency to place one's reliance on him/herself rather than others, to achieve maximum pleasure and minimum pain (Millon, 2006). These teens feel entitled to constant admiration and owed recognition for real and perceived talents. Consistent with high scores on this scale is the tendency to lack empathy for others (McCann, 1997). This scale is most similar to the DSM narcissistic personality type (McCann, 1997).

Scale 6A: Unruly

Conduct problems are common with youth who exhibit high scores on this Unruly scale, consistent with his/her rejection of socially acceptable behaviors. Limits will be resisted, as autonomy is of utmost importance to these teens. Compassion is rare, and preferred associations can be oriented toward illegal behavior with those who share similar antisocial tendencies. Easily wronged, adolescents with elevated scores in this area seek revenge for real or perceived injustices. This scale is most similar to the DSM antisocial personality disorder (McCann, 1997).

Scale 6B: Forceful

Behavior for teens that have a strong response to this scale is typified by offensive language, hostility, intimidation, and abuse of those around them. Not only do youth with elevated scores on this scale engage in frequent conflict with authority and peers alike, but they derive enjoyment from causing others pain. This scale is most similar to DSM sadistic personality disorder (McCann, 1997).

Scale 7: Conforming

Teens with high scores in this area present a veneer of willing compliance, while secretly they struggle with a desire to rebel and exert their own will. They typically deny their own aspirations in an attempt to avoid relational and psychic pain. This scale is most similar to the DSM obsessive-compulsive personality disorder (Millon, 2006).

Scale 8A: Oppositional

Common behavior observed in teens with elevated Oppositional scale score include stubbornness, feelings of being misunderstood, irritability, and resistance when unwanted demands are placed on him/her. Passive-aggressive and indirectly hostile behavior is common for adolescents who demonstrate a high score in this area. This scale is most similar to the DSM negativistic personality (Millon, 2006)

Scale 8B: Self-Demeaning

Teens that strongly identify with the Self-Demeaning scale have a tendency to extremely low self-esteem and be self-deprecating. They have a negative view of what happens to them in life, feel they deserve their perceived misfortune, and do not see any way of improving their

circumstances. Although it has been removed from the DSM, the self-defeating personality disorder is the closest DSM equivalent (McCann, 1997).

Scale 9: Borderline Tendency

The final scale, Borderline Tendency, is reserved for more intense and problematic than the other scales mentioned above. Features of other scales (such as oppositional and self-demeaning) are observed in these youth, but at a more severe level. Unstable moods, chronic periods of apathy, and a tendency toward self-mutilation and suicide are common. These teen's insatiable need for attention and support is never fully satisfied, contributing toward his/her fear of rejection or abandonment. This scale is most similar to DSM borderline personality disorder.

APPENDIX C

Comprehensive Chart of Theory-Derived Personality Disorders (n.d.)

Retrieved from http://www.millon.net/content/evo_theory.htm

	Existential Aim		Replication Strategy		
	Life Enhancement vs. Life Preservation		Propagation vs. Nurturance		
Polarity	Pleasure versus Pain		Self versus Other		
Deficiency, Imbalance, or Conflict	Pleasure (low) Pain (low or high)	Pleasure-Pain Reversal	Self (low) Other (high)	Self (high) Other (low)	Self-Other Reversal
	Personality Disorder				
Passive: Accommodation	Schizoid	Masochistic	Dependent	Narcissistic	Compulsive
	Melancholic				
Active: Modification	Avoidant	Sadistic	Histrionic Hypomanic	Antisocial	Negativistic
Structural Pathology	Schizotypal	Borderline Paranoid	Borderline	Paranoid	Borderline Paranoid

Tawnya Ayim (neé Steel)

ayimt@unlv.nevada.edu, tawnyaayim@gmail.com

Education
PHD | UNIVERSITY OF NEVADA, LAS VEGAS

· Major: Educational Psychology
· Cognate: School Psychology

EDS | MAY, 2009 | UNIVERSITY OF NEVADA, LAS VEGAS

· Major: Educational Psychology: School Psychology

MS | MAY, 2007 | UNIVERSITY OF NEVADA, LAS VEGAS

· Major: Educational Psychology

BA | MAY, 2005 | VANGUARD UNIVERSITY OF SOUTHERN CALIFORNIA

· Major: Sociology

Doctoral Dissertation

Personality Patterns of Students Who Make a Threat of Targeted School Violence

Publications and Conference Presentations
Professional Presentations

Steel, T., Conrad, L. *School psychology and diversity training: Why is it necessary?* Poster presented at National Association of School Psychologists National Convention, February, 2008, New Orleans, LA

Steel, T., Conrad, L. *The importance of diversity training in school psychology*. Poster presented at The Graduate Research in Preparation Symposium at University of Nevada, Las Vegas, March, 2008

Steel, T., Conrad, L. *Diversity training in school psychology: A literature review.* Poster presented at The student research exhibit at University of Nevada, Las Vegas, April 2008

Honors and Leadership

Nevada Association of School Psychologists, Student Representative

Professional Memberships

National Association of School Psychologists

Nevada Association of School Psychologists

Experience
CRISIS TEAM SCHOOL PSYCHOLOGIST | CLARK COUNTY SCHOOL

DISTRICT|11/2009-8/2015

Conduct threat assessments with students who have made a threat to commit an act of targeted school violence. Provide counseling services for students who have participated in a threat assessment. Identify and provide pertinent resources for families in need. Conduct suicide ideation assessments. Consult with school counselors, nurses, and psychologists on conducting suicide ideation assessments. Provide counseling services for students who have received inpatient care for suicidal ideation or other mental health issues. Provide postvention services for schools who have suffered the loss of a student or staff member. Assist schools in dealing with various crisis situations.

SCHOOL PSYCHOLOGIST | CLARK COUNTY SCHOOL DISTRICT | 8/2015-1/2017

Conduct special education evaluations. Write comprehensive multidisciplinary reports and lead meetings discussing the findings with families and school staff. Provide counseling services for students in need. Conduct counseling groups related to timely topics based on data from a needs assessment.

SCHOOL PSYCHOLOGIST | ACADEMICA NEVADA | 1/2016-6/2018

Provide independent contractor services with Academica Nevada. I have primarily served the Pinecrest Academy campuses, assigned to Pinecrest Inspirada, St. Rose and serving Horizon campus as needed. I conduct special education evaluations including cognitive academic achievement, social/emotional, adaptive skills assessments. As of June 2018, I will complete overflow cases as needed.

INDEPENDENT ASSESSMENT CONULTANT | NASRI ACADEMY | 1/2018-CURRENT

Conduct cognitive testing to inform the family and school team of the child's cognitive performance for the purposes of determining admission to the Academy. Provide consultation with school administration and the family regarding the analysis of the testing results, as well as a written report of the results and analysis.

SCHOOL PSYCHOLOGIST | DEMOCRACY PREPATORY ACADEMY AT AGASSI

CAMPUS | 6/2018-CURRENT

Conduct special education evaluations including cognitive, academic achievement, social/emotional, adaptive skills assessments. Assist teachers in creating Individualized Education Programs for students receiving special education services. Organize mental health supports for students in need, coordinating with school social workers, school counselors, administration and community based therapeutic groups. Train staff on suicide ideation protocol and procedures.